

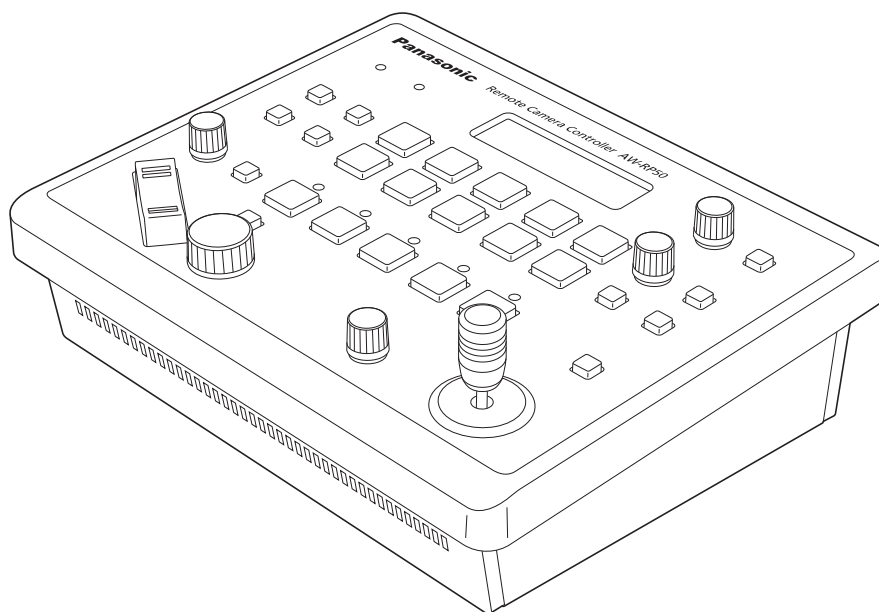
# Panasonic<sup>®</sup>

## Operating Instructions <Operations and Settings>

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### Remote Camera Controller

Model No. **AW-RP50N**



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## How the model's Operating Instructions manuals are configured

- The manual of this remote camera controller (hereafter, "the unit") is divided into two manuals: one is the <Operations and Settings> (this manual in the CD-ROM), and the other is the <Basics>. Before installing the unit, be sure to read the <Basics> to ensure that the unit is installed correctly.

# Before use

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## ■ Overview

This unit is a controller which is designed to control remote cameras (cameras integrated with pan-tilt heads) and pan-tilt head systems (which consist of pan-tilt heads and the cameras which are mounted on them).

By means of an IP connection, an operating environment where the unit is tied in with the AW-HE50 HD integrated camera and AW-HS50 compact live switcher is achieved. When IP connections are used, the unit can be used to control up to 100 cameras.

When serial connections are used, up to five remote cameras and pan-tilt head systems can be controlled.

## ■ Concerning the Operating Instructions

- For the purposes of these instructions, AW-RP50N is referred to as “AW-RP50”. Similarly, “AW-HE50HN” and “AW-HE50SN” are referred to as “AW-HE50,” and AW-HS50N is referred to as “AW-HS50”.
- In these instructions, the phrases “pan-tilt head and camera combination” and “camera integrated with a pan-tilt head” are both referred to collectively as “**remote camera**” except in places where specific equipment is mentioned.

## ■ Trademarks and registered trademarks

- Microsoft, Windows, Windows Vista and Internet Explorer are the registered trademarks or trademarks of Microsoft Corporation of the United States in the United States, Japan and other countries.
- Adobe and Reader are the registered trademarks or trademarks of Adobe Systems Incorporated in the United States and other countries.
- Other names of companies or products appearing in the text are the registered trademarks or trademarks of the companies concerned.

## ■ Copyrights

It is forbidden to transfer, copy, reverse assemble, reverse compile or reverse engineer the software included in this unit or to engage in any act of exportation which contravenes the applicable export laws and regulations.

## ■ Concerning the ratings display

The unit's name, model number and electrical ratings are indicated on its bottom panel.

## ■ Disclaimer

Panasonic Corporation will accept absolutely no responsibility whatsoever when any of the following is applicable:

- ① Any accidental, special or consequential damages or harm caused either directly or indirectly in connection with the unit
- ② Any problems with or damage to the unit, etc. resulting from misuse, abuse or carelessness on the part of the user
- ③ When the user has disassembled, repaired or remodeled the unit
- ④ Any inconvenience, losses, damages or harm that result from the disability to display images as a result of some reason or cause including problems with or malfunctioning of the unit
- ⑤ Any problem caused by any system in which the unit is used in combination with the equipment of third parties or any inconvenience, damages or harm occurring as a result of such
- ⑥ Any inconvenience, damages or losses resulting from accidents caused by an inadequate installation method or any factors other than a defect in the product itself
- ⑦ Any losses of any registered information whatever may be the cause of those losses
- ⑧ Any damages, claims, etc. due to loss or leakage of the setting data saved on this unit or in a personal computer

## ■ Network-related precautions

This unit is connected to a network and used: As such, it may be susceptible to the following damage, harm or losses.

- ① Leakage or release of information via the unit
- ② Illegal operation of the unit by third parties with malicious intent
- ③ Interference with or shutdown of the unit by third parties with malicious intent

To prevent these kinds of damage, harm or losses, users are urged to take the following measures to ensure network security including, but not limited to, the following:

- The unit must be secured on the network by use of firewalls or other measures.
- When the unit is to be used in a system to which personal computers are connected, notification of virus protection and safe guards against illegal programs are to be implemented and periodically checked.
- Unit should be installed in a manner in which its cables and other accessories cannot be easily damaged.

# How to turn the power of the remote cameras on and off

## ■ How to turn the power of the remote cameras on

Follow one of the procedures below to turn on the power of the remote cameras.

- Turning on the power one camera at a time
- Turning on the power of a multiple number of cameras
  - ◇ Turning on the power of all the cameras
  - ◇ Turning on the power of the selected group of cameras

Each of these procedures is described in turn below.

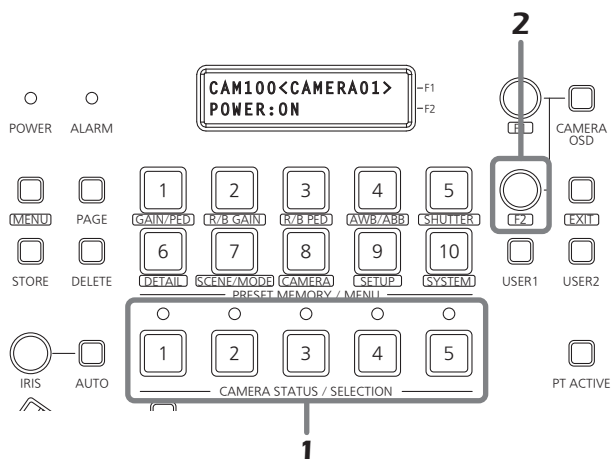
### Turning on the power one camera at a time

#### 1 Select the remote camera.

When the corresponding CAMERA STATUS/SELECTION button is held down, the name of the remote camera is displayed on the top line of the LCD panel and POWER OFF is displayed on the bottom line.

#### 2 Turn the F2 dial to select “ON,” and press the F2 dial.

The power of the selected remote camera is turned on.



### Turning on the power of a multiple number of cameras

#### 1 Set the MENU button to ON.

Press the MENU button to light its indicator.

#### 2 Set PRESET MEMORY/MENU 8 button (CAMERA) to ON.

When the button is pressed and its indicator is lighted, the [CAMERA] menu is displayed on the LCD panel.

[1] GROUP ▼

#### 3 Turn the F1 dial to display the [POWER] menu, and press the F1 dial.

[2] POWER ◆



Press the F1 dial.

1. CAM POWER ▼

OFF↓

### Turning on the power of all the cameras

#### 4 Turn the F2 dial to select “ALL ON,” and press the F2 dial.

1. CAM POWER ▼

ALL ON↓

The power of all the remote cameras is now turned on.

### Turning on the power of the selected group of cameras

#### 4 Turn the F2 dial to select “GROUP ON,” and press the F2 dial.

1. CAM POWER ▼

GROUP ON↓

The power of the selected group of remote cameras is turned on.

# Setting and operating the preset memories

This unit has a preset memory function for registering the preset data of the shooting positions and settings of the remote cameras.  
Up to 100 sets of data (presets) can be registered in these memories.

## ■ Registering data in the preset memories

- 1

Press one of the CAMERA STATUS/ SELECTION buttons 1 to 5 to select the remote camera to be operated.
- 2

Output the images to be shot by the camera to the monitor.  
  
The camera angle to be registered is determined by operating the PAN/TILT lever and ZOOM button. If necessary, adjust the focus and iris as well.
- 3

Press the STORE button.
- 4

After pressing the PAGE button, press the PRESET MEMORY/MENU button to specify the page number to be registered.  
  
In this step, the number of the page to be registered as the preset memory is specified.
- 5

Hold down the PRESET MEMORY/MENU button of the number on the page.  
  
In this case, specify the number on the page which was specified in step 4.

To register more data, repeat steps 2 to 5.

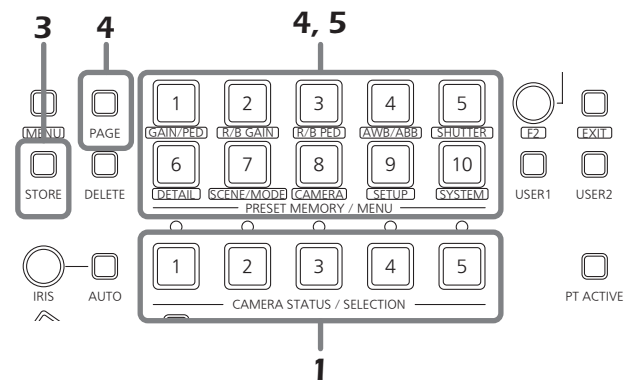
- When specifying a different “number on the page” on the same “page number,” it is registered by skipping step 4 and carrying out the operation in step 5 only.

### Preset numbers and registered pages

Preset No.	Page No.	Number on the page
1 to 10	1	1 to 10
11 to 20	2	1 to 10
21 to 30	3	1 to 10
31 to 40	4	1 to 10
41 to 50	5	1 to 10
51 to 60	6	1 to 10
61 to 70	7	1 to 10
71 to 80	8	1 to 10
81 to 90	9	1 to 10
91 to 100	10	1 to 10

### Memo

**Example:** When specifying preset 21  
Press the following buttons in the order given: PAGE button → PRESET MEMORY/MENU 3 button → PRESET MEMORY/MENU button 1.



### Note

When specifying the number on the page, it is registered by holding down the PRESET MEMORY/MENU button.

# Setting and operating the preset memories

## ■ Executing the preset data

- 1 Press one of the CAMERA STATUS/SELECTION buttons 1 to 5 to select the remote camera to be operated.**

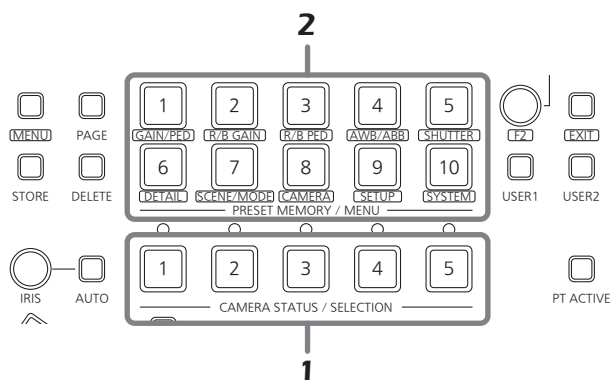
Select the remote camera which is to be pointed at the camera angle registered in the preset memory.

- 2 Press the PRESET MEMORY/MENU button, and specify the registered page number and number on the page.**

Take this step while the MENU button and PAGE button are in the OFF status.

To follow this operation with the execution of a preset on another page, specify the preset number by pressing the following buttons in the order given: PAGE button → PRESET MEMORY/MENU button → PRESET MEMORY/MENU button.

When a preset operation has been carried out, the indicator of the specified PRESET MEMORY/MENU button lights.



## ■ Deleting the preset memory data

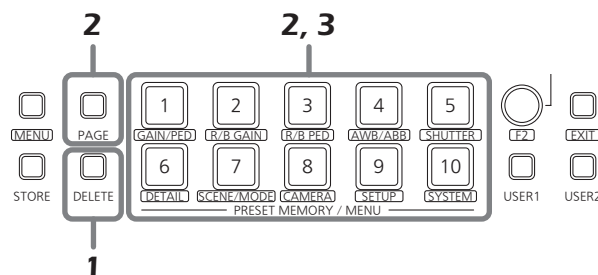
- 1 Press the DELETE button.**
- 2 After pressing the PAGE button, press the PRESET MEMORY/MENU button to specify the page number of the preset memory data to be deleted.**

In this step, specify the number of the page to be deleted.

- 3 Hold down the PRESET MEMORY/MENU button for the number on the page.**

For this step, specify the number on the page which was specified in 2.

The preset memory data is deleted by holding down the PRESET MEMORY/MENU button specifying the number on the page.



# Selecting the settings for a selected remote camera

The following settings and adjustments can be performed for a selected remote camera directly from this unit.

- Gain
- Pedestal
- R and B gain values
- White balance
- Black balance
- Shutter speed
- Detail
- Shooting mode selection
- Color bar selection

## Note

It is not possible to perform operations for those functions which are not supported by the model concerned.

For further details, refer to the information on the settings table.

## Setting the gain

In places which are too dark, increase the gain level; conversely, in places which are too light, reduce the gain level.

When “Auto” is selected, the light quantity is adjusted automatically.

When the gain is increased, the noise level also increases.

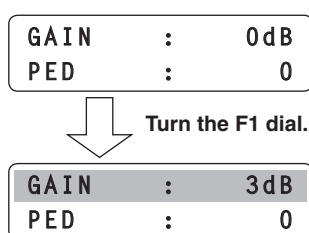
### 1 Set the MENU button to ON.

Press the MENU button to light its indicator.

### 2 Set the PRESET MEMORY/MENU 1 button (GAIN/PED) to ON.

When the button is pressed and its indicator lights, the [GAIN/PED] menu is displayed on the LCD panel.

### 3 Turn the F1 dial to select the setting.



## Note

The gain setting will differ depending on the remote camera connected.

For further details, check the operating instructions of the model concerned.

## Setting the pedestal

Perform the black level (pedestal) adjustment in order to make it easier to see the very dark parts of the images. Adjustment in the “-” direction makes the parts closer to black; conversely, adjustment in the “+” direction makes the parts closer to white.

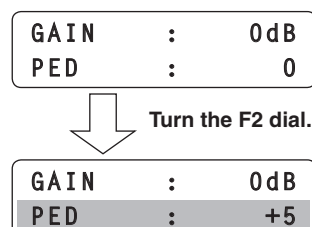
### 1 Set the MENU button to ON.

Press the MENU button to light its indicator.

### 2 Set the PRESET MEMORY/MENU 1 button (GAIN/PED) to ON.

When the button is pressed and its indicator lights, the [GAIN/PED] menu is displayed on the LCD panel.

### 3 Turn the F2 dial to select the setting.



## Note

The pedestal setting will differ depending on the remote camera connected.

For further details, check the operating instructions of the model concerned.

# Selecting the settings for a selected remote camera

## ■ Setting the R and B gain values

Adjust the amounts by which the R gain and B gain values are to be incremented or decremented using the G gain value obtained when the white balance has been adjusted as the reference.

When auto white balance is performed, the adjustment value is set to "000".

**1 Set the MENU button to ON.**

Press the MENU button to light its indicator.

**2 Set the PRESET MEMORY/MENU 2 button (R/B GAIN) to ON.**

When the button is pressed and its indicator lights, the [R/B GAIN] menu is displayed on the LCD panel.

**3 Turn the F1 dial to select the R gain setting; similarly, turn the F2 dial to select the B gain setting.**

RGAIN	:	±000
BGAIN	:	±000

**Note**

The R gain and B gain settings will differ depending on the remote camera connected.  
For further details, check the operating instructions of the model concerned.

## ■ Setting the R and B pedestal

Adjust the amount by which the R pedestal and B pedestal levels are to be incremented or decremented using the G pedestal level obtained when the black balance has been adjusted as the reference.

When auto black balance is performed, the adjustment value is set to "000".

**1 Set the MENU button to ON.**

Press the MENU button to light its indicator.

**2 Set the PRESET MEMORY/MENU 3 button (R/B PED) to ON.**

When the button is pressed and its indicator lights, the [R/B PED] menu is displayed on the LCD panel.

**3 Turn the F1 dial to select the R pedestal setting; similarly, turn the F2 dial to select the B pedestal setting.**

RPED	:	±000
BPED	:	±000

**Note**

The R pedestal and B pedestal settings will differ depending on the remote camera connected.  
For further details, check the operating instructions of the model concerned.



# Selecting the settings for a selected remote camera

## ■ Setting the white balance

The ratio between RGB (three primary colors) is adjusted so that white will be reproduced accurately.

If the white balance is off, not only will white be reproduced poorly but the color tone of the entire picture will also deteriorate.

The white balance must be adjusted when using a remote camera for the first time or when the remote camera has not been used for a prolonged period of time. It must also be adjusted when changes have been made in the lighting conditions or brightness.

The white balance can be adjusted automatically or manually (fine adjustment after automatic adjustment).

In addition, preset values or the "auto tracking white adjustment (ATW)" which continues to adjust the white balance automatically all the time can be selected.

The results of white balance adjustments can be stored in memory A or memory B when "AWB A" or "AWB B" has been selected for the white balance.

### ■ Selecting the white balance mode

Follow the steps below to set the white balance mode.

#### 1 Set the MENU button to ON.

Press the MENU button to light its indicator.

#### 2 Set the PRESET MEMORY/MENU 4 button (AWB/ABB) to ON.

When the button is pressed and its indicator lights, the [AWB/ABB] menu is displayed on the LCD panel.

#### 3 Turn the F1 dial to select the white balance mode.

AWB MODE: AWB B↓  
SET : AWB↓

The modes which can be selected differ depending on the remote camera connected.

Remote camera	Mode	Remote camera status
AW-HE50	AWB A	The status of the white balance registered in remote camera memory A is established.
	AWB B	The status of the white balance registered in remote camera memory B is established.
	ATW	In this mode, the white balance is automatically adjusted continuously all the time and automatically compensated even when the light source or color temperature has changed.
AW-HE100 AW-HE870 AW-E860 AW-E750 AW-E650 AW-E350	AWB A	The status of the white balance registered in remote camera memory A is established.
	AWB B	The status of the white balance registered in remote camera memory B is established.
	3200K	The status of the white balance which was adjusted at a brightness of 3200K is established.
	5600K	The status of the white balance which was adjusted at a brightness of 5600K is established.
	ATW	In this mode, the white balance is automatically adjusted continuously all the time and automatically compensated even when the light source or color temperature has changed.
AK-HC1500 AK-HC1800	—	

# Selecting the settings for a selected remote camera

## Automatically adjusting the white balance

Set the automatic adjustment if the coloring appears unnatural under certain light sources or other conditions. If the white serving as the reference can be recognized, it is possible to shoot with natural coloring.

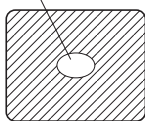
### Memo

When adjusting the white balance, display a white subject (such as a white wall or white handkerchief) so that it fills the screen.

The white subject must be large enough to take up at least 10 % of the screen's surface area, and it must be displayed at the center.

Do not allow shiny or high-brightness subjects to be displayed.

The white area must be at least 10 % of the surface area of the screen



### 1 Set the MENU button to ON.

Press the MENU button to light its indicator.

### 2 Set the PRESET MEMORY/MENU 4 button (AWB/ABB) to ON.

When the button is pressed and its indicator lights, the [AWB/ABB] menu is displayed on the LCD panel.

AWB MODE: AWB A↓  
SET : AWB↓

### 3 Turn the F1 dial to select the place where the white balance is to be stored.

Select "AWB A" or "AWB B" to select the place where the white balance is stored.

### 4 Turn the F2 dial to select AWB, and press the F2 dial.

The remote camera now automatically adjusts the white balance, and registers it at the place selected in step 3.

When automatic adjustment is performed, the following details are displayed on the LCD panel.

#### AWB ACTIVE:

This appears while AWB is being executed.

#### AWB OK:

This appears for 3 seconds after AWB is completed successfully.

#### AWB NG:

This appears for 3 seconds after AWB is completed unsuccessfully.

(AWB was executed while ATW, 3200K or 5600K was selected.)

- If it was not possible to adjust the white balance properly, change the brightness, iris, subject, light source or other aspect, and try adjusting it again.

# Selecting the settings for a selected remote camera

## Manually adjusting the white balance

- 1 As with the automatic adjustment, fill the screen with a white subject.**
- 2 Connect a waveform monitor or color monitor to the video output connector on the currently selected remote camera.**
- 3 Set the MENU button to ON.**  
Press the MENU button to light its indicator.
- 4 Set the PRESET MEMORY/MENU 2 button (R/B GAIN) to ON.**  
When the button is pressed and its indicator lights, the [R/B GAIN] menu is displayed on the LCD panel.

RGAIN	:	±000
BGAIN	:	±000
- 5 Turn the F1 dial to select the R gain setting; similarly, turn the F2 dial to select the B gain setting.**

### Note

The R and B gain settings will differ depending on the remote camera connected.  
For further details, check the operating instructions of the model concerned.

## Automatic color temperature tracking (ATW)

This function provides compensation automatically so that the white balance is adjusted even when the light source or color temperature changes during shooting, so that images that appear the least odd (that is, the most natural looking) are produced.

- 1 Set the MENU button to ON.**  
Press the MENU button to light its indicator.
- 2 Set the PRESET MEMORY/MENU 4 button (AWB/ABB) to ON.**  
When the button is pressed and its indicator lights, the [AWB/ABB] menu is displayed on the LCD panel.
- 3 Turn the F1 dial to select ATW.**

AWB MODE:	ATW↓
SET	: AWB↓

- If there is no white on the screen, it may not be possible to compensate the white balance properly.  
Similarly, under certain light source and color temperature conditions, it may not be possible to compensate the white balance properly.

### Note

The setting will differ depending on the remote camera connected.  
For further details, check the operating instructions of the model concerned.

# Selecting the settings for a selected remote camera

## ■ Setting the black balance

The black balance must be adjusted when using a remote camera for the first time or when the remote camera has not been used for a prolonged period of time.

It must also be adjusted when significant changes have occurred in the ambient temperature or at the change of the seasons.

If the camera is used with the same settings and under the same conditions, the black balance need not be adjusted again.

When the black balance is adjusted again, the previous memory data will be erased and replaced with the new black balance settings.

When the black balance is set, the R and B pedestal adjustment settings are returned to  $\pm 0$ .

### ■ Automatically adjusting the black balance

#### 1 Set the MENU button to ON.

Press the MENU button to light its indicator.

#### 2 Set the PRESET MEMORY/MENU 4 button (AWB/ABB) to ON.

When the button is pressed and its indicator lights, the [AWB/ABB] menu is displayed on the LCD panel.

#### 3 Turn the F2 dial to select ABB, and press the F2 dial.

AWB MODE: AWB B↓
SET : ABB↓

The remote camera now automatically adjusts the black balance.

When automatic adjustment is performed, the following details are displayed on the LCD panel.

##### ABB ACTIVE:

This appears while ABB is being executed.

##### ABB OK:

This appears for 3 seconds after ABB was completed successfully.

##### ABB NG:

This appears for 3 seconds after ABB was completed unsuccessfully.

#### Note

The setting will differ depending on the remote camera connected.  
For further details, check the operating instructions of the model concerned.

### ■ Manually adjusting the black balance

#### 1 Connect a waveform monitor or color monitor to the video output connector on the currently selected remote camera.

#### 2 Set the MENU button to ON.

Press the MENU button to light its indicator.

#### 3 Set the PRESET MEMORY/MENU 3 button (R/B PED) to ON.

When the button is pressed and its indicator lights, the [R/B PED] menu is displayed on the LCD panel.

RPED	:	$\pm 000$
BPED	:	$\pm 000$

#### 4 Turn the F1 dial to select the R pedestal setting; similarly, turn the F2 dial to select the B pedestal setting.

#### Note

The pedestal settings will differ depending on the remote camera connected.  
For further details, check the operating instructions of the model concerned.

# Selecting the settings for a selected remote camera

## ■ Setting the shutter speed

The shutter mode and shutter speed of the remote camera can be selected.

### 1 Set the MENU button to ON.

Press the MENU button to light its indicator.

### 2 Set the PRESET MEMORY/MENU 5 button (SHUTTER) to ON.

When the button is pressed and its indicator lights, the [SHUTTER] menu is displayed on the LCD panel.

SHUTTER :	Step
SPEED :	1/100

### 3 Turn the F1 dial to select the shutter mode.

When “Step” has been selected as the shutter mode, the shutter speed can be selected by turning the F2 dial.

#### Notes

- The setting will differ depending on the remote camera connected.  
For further details, check the operating instructions of the model concerned.
- When the shutter speed of a remote camera connected serially is set and a remote camera in another group is assigned to the CAMERA STATUS/ SELECTION button, the shutter speed will be set to “1/100” when a menu operation is next performed.

## ■ Setting the detail

The image detail (image sharpness) can be adjusted.

### 1 Set the MENU button to ON.

Press the MENU button to light its indicator.

### 2 Set the PRESET MEMORY/MENU 6 button (DETAIL) to ON.

When the button is pressed and its indicator lights, the [DETAIL] menu is displayed on the LCD panel.

DETAIL :	On
LEVEL :	LOW

### 3 Turn the F1 dial to select On or Off.

### 4 Turn the F2 dial to select the detail level.

#### Note

The detail setting will differ depending on the remote camera connected.  
For further details, check the operating instructions of the model concerned.

# Selecting the settings for a selected remote camera

## ■ Setting the shooting mode

Select the shooting mode that matches the shooting conditions.  
Select the mode according to the shooting conditions and your preferences.

**1 Set the MENU button to ON.**

Press the MENU button to light its indicator.

**2 Set the PRESET MEMORY/MENU 7 button (SCENE/MODE) to ON.**

When the button is pressed and its indicator lights, the [SCENE/MODE] menu is displayed on the LCD panel.

**3 Turn the F1 dial to select the shooting mode.**

SCENE	:	MANU1
MODE	:	CAM

**Note**

The setting will differ depending on the remote camera connected.  
For further details, check the operating instructions of the model concerned.

## ■ Specifying the color bars

The images to be output from the remote camera can be switched between the “camera images” and “color bars”.

**1 Set the MENU button to ON.**

Press the MENU button to light its indicator.

**2 Set the PRESET MEMORY/MENU 7 button (SCENE/MODE) to ON.**

When the button is pressed and its indicator lights, the [SCENE/MODE] menu is displayed on the LCD panel.

**3 Turn the F2 dial to select “CAM” (camera image) or “BAR” (color bars).**

SCENE	:	MANU1
MODE	:	BAR

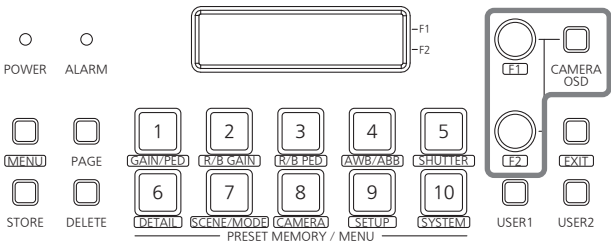
# Operating the menu items of the selected remote camera

The menu operations of the remote cameras can be operated from the unit for the remote camera which is now selected.

The CAMERA OSD button, F1 dial and F2 dial are used to perform the operations.

Note

The operations differ depending on the remote camera model.  
For details on the menu items which are displayed, check the operating instructions of the model concerned.

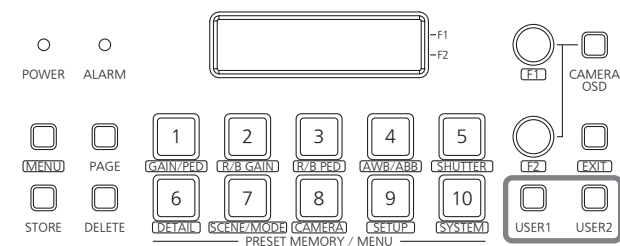


## Table of operations

Remote camera	Menu ON/OFF	Cursor movements	Selecting menu items and entering the selection	Selecting and entering the values
AW-HE50	Hold down the CAMERA OSD button.	Turn the F1 dial.	Press the F1 dial.	Turn the F1 dial.
AW-HE100				
AW-HE870				
AW-E860			Turn the F2 dial. (clockwise)	Turn the F2 dial.
AW-E750				
AW-E650				
AW-E350				
AK-HC1500			Press the F1 dial.	Turn the F1 dial.
AK-HC1800				

# Setting the USER buttons

Menu items can be assigned to the two USER buttons (USER1, USER2).  
After assigning an item, the assigned menu item can be displayed simply by pressing one of these USER buttons (USER1 or USER2).



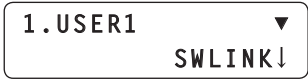
Menu item	Details of operation performed
SWLINK	This enables the link between the unit and switcher.
BUSCONT	This is the bus switching setting.
FASIST	This sets the focus assist function.
CAMSEL	This displays icons at the bottom left of the images from the remote camera selected by the unit on the multi view display of the switcher.
TALLY	This sends the tally information sent periodically by UDP from the switcher to the remote camera.
CAMINF	This sends the camera information of the remote camera selected to the switcher.
AWB	AWB is executed when the USER button, in which AWB has been assigned, is pressed. When AWB is executed successfully, the indicator of the button goes off; conversely, when it is not executed successfully, it blinks.
ABB	ABB is executed when the USER button, in which AWB has been assigned, is pressed. When ABB is executed successfully, the indicator of the button goes off; conversely, when it is not executed successfully, it blinks.
POWER OFF	When the USER button in which POWER OFF has been assigned is pressed, the indicator of the button lights for an instant, and power OFF is requested for all the remote cameras connected.

## ■ Registering functions in the USER buttons

- 1 Set the MENU button to ON.**  
Press the MENU button to light its indicator.
- 2 Set the PRESET MEMORY/MENU 9 button (SETUP) to ON.**  
When the button is pressed and its indicator lights, the [SETUP] menu is displayed on the LCD panel.



- 3 Press the F1 dial.**
- 4 Turn the F1 dial to display [USER1] or [USER2].**



- 5 Turn the F2 dial to select the item to be assigned, and press the F2 dial.**



Turn the F2 dial, and then press it.





# Setting the functions

This section describes how the unit's functions are set. The following functions can be set.

- Setting of the remote camera operations
- Registration of functions in the USER buttons
- Setting the speed at which to move to the preset memory setting position
- Setting the control items used when preset data is executed
- Controlling the peripheral devices connected to the remote cameras
  - ND filter
  - AC adapter (AW-PS300A)
  - Defroster
  - Wiper
  - Heater, fan
  - Halogen lamp
- Assignment of preset data when emergency interrupts occur
- Locking of button operations

The settings are established using the [SETUP] menu. First, the basic menu operations will be described.

## 1 Set the MENU button to ON.

Press the MENU button to light its indicator.

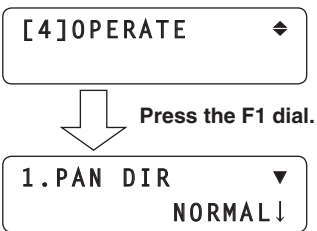
## 2 Set the PRESET MEMORY/MENU 9 button (SETUP) to ON.

When the button is pressed and its indicator lights, the [SETUP] menu is displayed on the LCD panel.

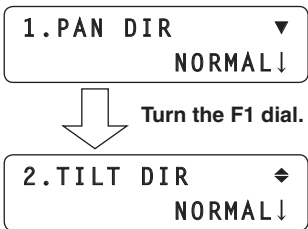


## 3 Turn the F1 dial to display the target menu item, and press the F1 dial.

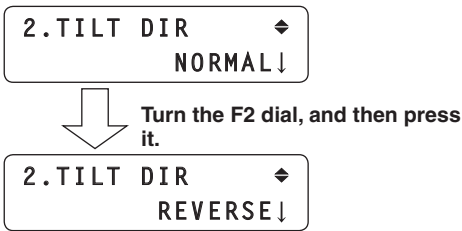
For details on the [SETUP] menu items, refer to the "Table of menu items".



## 4 Turn the F1 dial to select the target menu item.



## 5 Turn the F2 dial to select the setting. Then press the F2 dial to change the setting.



# Setting the functions

---

## ■ Setting the remote camera operations

Set these operations by selecting the [SETUP] menu followed by the [OPERATE] menu.

[4] OPERATE ◆

## ● Setting the pan, tilt, zoom and focus operation directions

Set the directions in which the remote camera is to move when the panning, tilting, zooming or focusing operation has been initiated from the unit.

### ■ Setting the panning direction

---

From the [SETUP] menu, select [OPERATE] and display [PAN DIR]. Then select either “NORMAL” or “REVERSE”.

1. PAN DIR ▼  
NORMAL↓

This sets the operation of the remote camera in the horizontal direction in response to the horizontal manipulation of the PAN/TILT lever.

When “NORMAL” is selected as the setting, the remote camera will move to the left when the PAN/TILT lever is leaned toward the left and, conversely, it will move to the right when the lever is leaned toward the right.

When “REVERSE” is selected, the remote camera will move in the opposite directions.

### ■ Setting the tilting direction

---

From the [SETUP] menu, select [OPERATE] and display [TILT DIR]. Then select either “NORMAL” or “REVERSE”.

2. TILT DIR ◆  
NORMAL↓

This sets the operation of the remote camera in the vertical direction in response to the vertical manipulation of the PAN/TILT lever.

When “NORMAL” is selected as the setting, the remote camera will move upward when the PAN/TILT lever is leaned away from you and, conversely, it will move downward when the lever is leaned toward you.

When “REVERSE” is selected, the remote camera will move in the opposite directions.

### ■ Setting the zooming direction

---

From the [SETUP] menu, select [OPERATE] and display [ZOOM DIR]. Then select either “NORMAL” or “REVERSE”.

3. ZOOM DIR ◆  
NORMAL↓

This sets the zooming operation of the lens in response to the operation of the ZOOM button.

When “NORMAL” is selected as the setting, the lens zooms toward the tele end when the TELE side of the ZOOM button is pressed and, conversely, it will zoom toward the wide end when the WIDE side is pressed.

When “REVERSE” is selected, the lens will move in the opposite directions.

### ■ Setting the focusing direction

---

From the [SETUP] menu, select [OPERATE] and display [FOCUS DIR]. Then select either “NORMAL” or “REVERSE”.

4. FOCUS DIR ◆  
NORMAL↓

This sets the focusing operation of the lens in response to the operation of the FOCUS/PUSH OAF dial.

When “NORMAL” is selected as the setting, the lens focus moves toward the far end when the dial is turned clockwise and, conversely, it will move toward the near end when the dial is turned counterclockwise.

When “REVERSE” is selected, the camera will move in the opposite directions.

# Setting the functions

## ●Settings when the remote camera moves horizontally or vertically during tele shooting

During tele shooting, the remote camera’s pan/tilt operation are slowed down to make positioning easier.

From the [SETUP] menu, select [OPERATE] and display [SPEED WITH Z]. Then set the movement speed.



- This is the setting that takes effect for the AW-HE100 and AW-HE50.  
The speed setting differs between the AW-HE100 and AW-HE50.

Model connected	Setting
AW-HE100	Off, 1, 2
AW-HE50	Off, On

## ●Selecting the control items (pan, tilt, zoom and focus)

Select the control items for the currently selected remote camera.

From the [SETUP] menu, select [OPERATE] and display [SPEED TARGET]. Then select the control item.



### P/T/Z/F:

The operation speed setting takes effect for panning, tilting, zooming and focusing.

### P/T:

The operation speed setting takes effect for panning and tilting.

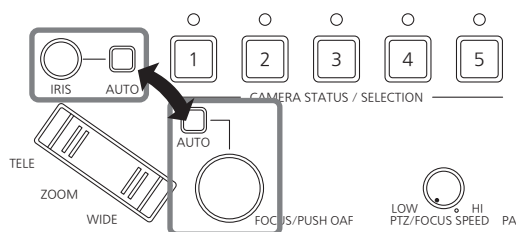
### Note

When the setting has been changed from “P/T/Z/F” to “P/T,” the zooming and focusing speed is fixed at the speed which was specified immediately before the change was made.

# Setting the functions

## ● Switching from focus control to iris control or vice versa

It is possible to switch the control, which is implemented by dial and button operations, from focus control to iris control (or vice versa).



From the [SETUP] menu, select [OPERATE] and display [FOCUS/IRIS]. Then select either "NORMAL" or "REVERSE".

7. FOCUS/IRIS ◆  
NORMAL ↓

When "REVERSE" is selected as the setting, focus control and iris control are switched.  
When "NORMAL" is selected, the original control is restored.

## ● Setting the PAN/TILT lever inclination and speed

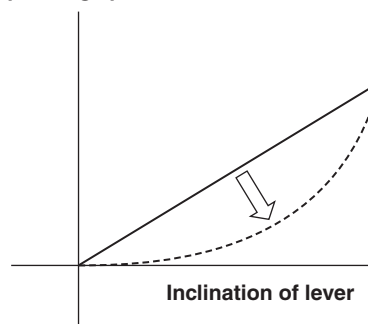
The correlation between angle and operating speed when the PAN/TILT lever is inclined can be adjusted.

From the [SETUP] menu, select [OPERATE] and display [P/T CURV]. Then set the correlation between the lever angle and its operating speed.

8. P/T CURV ▲  
1 ↓

Change the correlation between the angle and operating speed when the PAN/TILT lever is inclined.

Operating speed



# Setting the functions

## ■ Setting the speed at which to move to the position set by the preset memory

The speed at which to move to the position where the remote camera has been set to be in the preset memory when the preset operation is conducted can be set.

From the [SETUP] menu, select [PRESET] and display [DIAG SPEED]. Then set the speed.  
The higher the setting, the faster the operating speed.



## ■ Setting the operations to be performed when a preset operation is executed

The operations which the remote camera is to performed when the preset operation is conducted can be set.

From the [SETUP] menu, select [PRESET] and display [SCOPE]. Then set the operations to be performed.



The operations that the camera performs when a preset operation is executed differ depending on the mode selected.

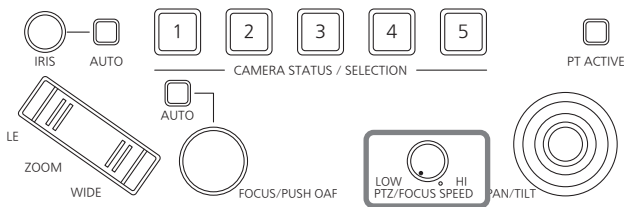
Mode	Operations performed
MODE A	Pan, tilt, zoom, focus, iris, gain, white balance
MODE B	Pan, tilt, zoom, focus, iris
MODE C	Pan, tilt, zoom

**Note**  
This function takes effect when the unit is connected to the AW-HE50. It does not work with any other models.

## ■ Adjusting the panning, tilting, zooming and focusing speed

The speed is adjusted uniformly for the panning, tilting, zooming and focusing together.

When the PTZ/FOCUS SPEED dial is turned clockwise, the speed is increased; conversely, when it is turned counterclockwise, it is reduced.



From the [SETUP] menu, select [OPERATE] and display [SPEED TARGET]. If P/T is selected, the speed adjustment is confined to panning and tilting only.

In this case, the zooming and focusing speed is fixed to the speed which was set immediately before P/T was selected.

# Setting the functions

## ■ Setting the movement range of the remote camera (limiter function)

This unit has a limiter function which is a function that limits the movement range of the remote cameras. Depending on the installation position, there may be an obstruction in the movement range, and the unit may come into contact with this obstruction. If the unit comes into contact with an obstruction, trouble or accidents may result. In cases like this, a limiter can be set in front of the obstruction to prevent contact. There are four limiter positions: the upper, lower, left and right limits of the movement range.

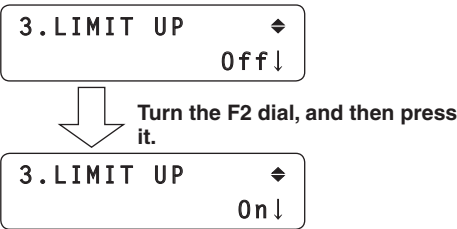
### ● Setting the upper limit

From the [SETUP] menu, select [PTZ ADJ] and display [LIMIT UP]. Then set the upper limit.

The setting that is displayed differs between the AW-HE50 and other remote cameras.

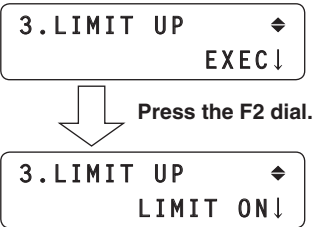
Display that appears with the AW-HE50

The current setting status is displayed in the LIMIT UP item.



Display that appears with other remote cameras

The setting status is displayed after the completion of the setting in the LIMIT UP item.



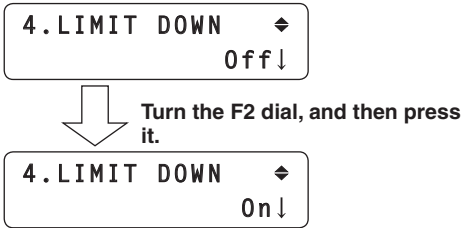
### ● Setting the lower limit

From the [SETUP] menu, select [PTZ ADJ] and display [LIMIT DOWN]. Then set the lower limit.

The setting that is displayed differs between the AW-HE50 and other remote cameras.

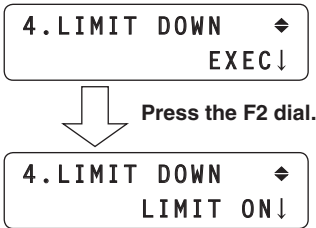
Display that appears with the AW-HE50

The current setting status is displayed in the LIMIT DOWN item.



Display that appears with other remote cameras

The setting status is displayed after the completion of the setting in the LIMIT DOWN item.



# Setting the functions

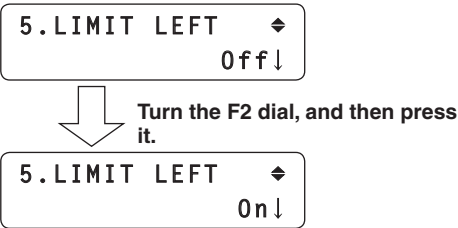
## ●Setting the left limit

From the [SETUP] menu, select [PTZ ADJ] and display [LIMIT LEFT]. Then set the left limit.

The setting that is displayed differs between the AW-HE50 and other remote cameras.

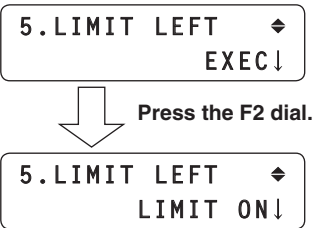
### Display that appears with the AW-HE50

The current setting status is displayed in the LIMIT LEFT item.



### Display that appears with other remote cameras

The setting status is displayed after the completion of the setting in the LIMIT LEFT item.



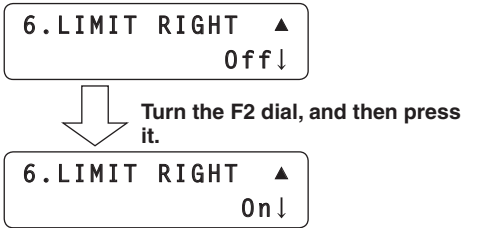
## ●Setting the right limit

From the [SETUP] menu, select [PTZ ADJ] and display [LIMIT RIGHT]. Then set the right limit.

The setting that is displayed differs between the AW-HE50 and other remote cameras.

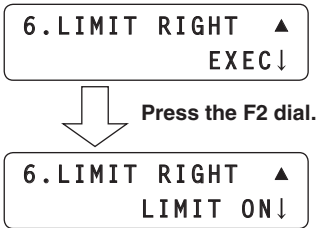
### Display that appears with the AW-HE50

The current setting status is displayed in the LIMIT RIGHT item.



### Display that appears with other remote cameras

The setting status is displayed after the completion of the setting in the LIMIT RIGHT item.



# Setting the functions

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## ■ Returning the remote cameras to their home position

The remote cameras connected can be returned to their home position.

From the [SETUP] menu, select [PRESET] and display [HOME POSITION]. Then press the F2 dial.

3.HOME POSITION▲  
SET↓



# Setting the functions

## ■ Controlling the peripheral devices connected to the remote cameras

When any of the peripheral devices listed below are connected to the remote cameras, they can be controlled.

- ND filter
- AC adapter (AW-PS300A)
- Defroster
- Wiper
- Heater, fan
- Halogen lamp

Control is exercised using the FUNCTION item of the [SETUP] menu.

[6] FUNCTION ◆

### ■ Controlling an ND filter

This item is used to control the ND filter when using a lens with an ND filter function on the currently selected remote camera.

From the [SETUP] menu, select [FUNCTION] and display [ND FILTER]. Then select ND filter control.

1. ND FILTER ◆  
Off ↓

### ■ Controlling an AC adapter (AW-PS300A)

This item is used to control shorting and releasing of the OPTION SW CONTROL OUT connector when using an AC adapter (AW-PS300A) for the currently selected remote camera.

From the [SETUP] menu, select [FUNCTION] and display [OPTION]. Then select shorting or releasing.

2. OPTION ◆  
Off ↓

### ■ Controlling a defroster

This item is used to control a defroster when using a remote camera (AW-PH650) equipped with a defroster function as the currently selected remote camera.

From the [SETUP] menu, select [FUNCTION] and display [DEFROSTER]. Then select defroster On or Off.

3. DEFROSTER ◆  
Off ↓

### ■ Controlling a wiper

This item is used to control a wiper when using a remote camera (AW-PH650) equipped with a wiper function as the currently selected remote camera.

From the [SETUP] menu, select [FUNCTION] and display [WIPER]. Then select wiper On or Off.

4. WIPER ◆  
Off ↓

### ■ Controlling a heater/fan

This item is used to control a heater/fan when using a remote camera (AW-PH650) equipped with a heater or fan function as the currently selected remote camera.

From the [SETUP] menu, select [FUNCTION] and display [HEATER/FAN]. Then select heater/fan On or Off.

5. HEATER/FAN ◆  
Off ↓

### ■ Controlling a halogen lamp

This item is used to control the lighting (On) and extinguishing (Off) of the halogen lamp when a halogen lamp has been connected to the currently selected remote camera.

From the [SETUP] menu, select [FUNCTION] and display [LAMP]. Then select halogen lamp lighting (On) and extinguishing (Off).

6. LAMP ▲  
Off ↓

# Setting the functions

## ■ Adjusting the minimum pan/tilt start speed

The minimum speed at which the pan-tilt head is to start moving is automatically adjusted to ensure that the remote camera will start moving smoothly in line with the inclination of the PAN/TILT lever when manually operating the pan-tilt head using the joystick.  
This adjustment enables the play in the PAN/TILT lever to be reduced.

From the [SETUP] menu, select [PTZ ADJ] and display [P/T MIN SPEED]. Then press the F2 dial.



When the automatic adjustment is completed, the indicators of both the PRESET MEMORY/MENU 9 button (SETUP) and the corresponding CAMERA STATUS/SELECTION button of the camera go off.

## ■ Adjusting the minimum lens zoom start speed

This adjustment ensures that the lens zoom will start moving smoothly in line with the inclination of the ZOOM button when operating the lens zoom using the ZOOM button.

From the [SETUP] menu, select [PTZ ADJ] and display [Z MIN SPEED]. Then turn the F2 dial to set the compensation amount.



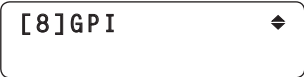
The lowest compensation amount is “1”, and the highest is “8”.  
No compensation is provided at the “0” setting.  
While observing the images on a monitor, move the ZOOM button slowly, and check whether the lens zoom starts moving smoothly.

# Setting the functions

## ■ Assigning preset data when emergency interrupts occur

Preset numbers can be assigned to execute presets for all the connected remote cameras when signals have been input to the TALLY/GPI input/output connector.

The presets are assigned using the GPI item on the [SETUP] menu.



## ■ Setting the preset numbers

From the [SETUP] menu, select [GPI], and display [EMERGENCY MD1], [EMERGENCY MD2] or [EMERGENCY MD3]. Then set the preset number.



This setting can be established for each GPI/O input.

- Input1: EMERGENCY MD1
- Input2: EMERGENCY MD2
- Input3: EMERGENCY MD3

## ■ Locking the button operations

This disables the operation of the CAMERA OSD button, and PRESET MEMORY/MENU buttons (1 to 7).

The button operations are locked using the MENU CTL item of the [SETUP] menu.



## ■ Setting button operation enable or disable

From the [SETUP] menu, select [MENU CTL] and display [MENU CONTROL]. Then set button operation enable or disable.



When “DISABLE” is selected, the following button operations are disabled:

- CAMERA OSD button
- MENU 1 to 7 buttons  
(However, these buttons can still be used to execute preset settings.)

# Linking the unit with the switcher

---

This setting is used to link the unit with an optional switcher (AW-HS50).

## ■ Switcher network settings

### 1 Set the MENU button to ON.

Press the MENU button to light its indicator.

### 2 Set PRESET MEMORY/MENU 10 button (SYSTEM) to ON.

When the button is pressed and its indicator is lighted, the [SYSTEM] menu is displayed on the LCD panel.

[1]CAMERA CTL ▼

### 3 Turn the F1 dial, display the SW IP ADR menu, and press the F1 dial.

[7]SW IP ADR ◆



Press the F1 dial.

1. IP: SW  
192↓168.000.020

### 4 Turn the F2 dial, select the IP address, and then press the F2 dial to enter the selection.

Set the IP address which has been set in the switcher.

1. IP: SW  
192↓168.000.020



Turn the F2 dial, and then press it.

1. IP: SW  
172.168↓000.020

Input the IP address in four blocks of numerals. When input advances to the last block and the F2 dial is pressed, the IP address is entered.

1. IP: SW  
172.168.000.030↓

# Linking the unit with the switcher

## ■ Setting the image output and image input

This setting establishes the correlation between the image output (remote camera) and image input (switcher).

By establishing the setting, the switcher is notified if a remote camera which has been set is selected when the remote cameras have been selected by the unit.

### 1 Set the MENU button to ON.

Press the MENU button to light its indicator.

### 2 Set PRESET MEMORY/MENU 10 button (SYSTEM) to ON.

When the button is pressed and its indicator is lighted, the [SYSTEM] menu is displayed on the LCD panel.

[1]CAMERA CTL ▼

### 3 Turn the F1 dial, display the SW ASSIGN menu, and press the F1 dial.

[3]SW ASSIGN ◆



Press the F1 dial.

1. INPUT1 ▼

CAM1↓

### 4 Turn the F1 dial to select the input line of the switcher.

1. INPUT1 ▼

CAM1↓



Turn the F1 dial.

2. INPUT2 ◆

CAM1↓

### 5 Turn the F2 dial, select the remote camera, and then press the F2 dial to enter the selection.

2. INPUT2 ◆

CAM1↓



Turn the F2 dial, and then press it.

2. INPUT2 ◆

CAM2↓

The switcher has five input lines: INPUT1 to INPUT5.

Take the above steps to set the remote cameras for the input lines, and then operate the remote cameras.

# Linking the unit with the switcher

## Switcher settings

A setting for controlling the switcher linked with the unit is available.

It is established using the [SETUP] menu.

Before taking the steps described here, the steps for “Switcher network settings” and “Setting the image output and image input” must be taken.

First, the basic menu operations will be described.

### 1 Set the MENU button to ON.

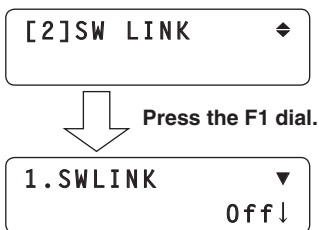
Press the MENU button to light its indicator.

### 2 Set PRESET MEMORY/MENU 9 button (SETUP) to ON.

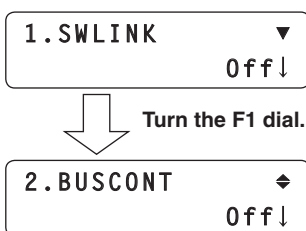
When the button is pressed and its indicator is lighted, the [SETUP] menu is displayed on the LCD panel.



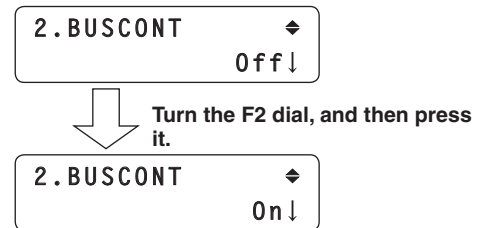
### 3 Turn the F1 dial, display the SW LINK menu, and press the F1 dial.



### 4 Turn the F1 dial to select the menu item to be set.



### 5 Turn the F2 dial, select the settings, and then press the F2 dial to change the setting.



## Link setting

From the [SETUP] menu, select [SW LINK] and display [SWLINK]. Then select On or Off.



When “On” is selected as the item setting, the settings mentioned below take effect, and the link with the switcher is established.

Control can also be exercised by assigning this setting to a USER button.

## Bus switching

From the [SETUP] menu, select [SW LINK] and display [BUSCONT]. Then select On or Off



When “On” is selected as the item setting, the materials set using the BUS item (described later) are sent from the remote camera to the switcher when the remote cameras has been selected using one of the unit’s CAMERA STATUS/SELECTION buttons.

Control can also be exercised by assigning this setting to a USER button.

# Linking the unit with the switcher

## Bus setting

From the [SETUP] menu, select [SW LINK] and display [BUS]. Then set the material (AUX, PVW, PinP or KEY) to be sent to the switcher.



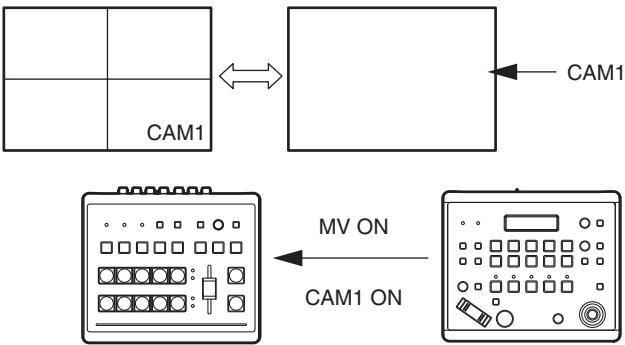
The materials set using this item are sent from the remote camera to the switcher when the remote camera has been selected using one of the unit's CAMERA STATUS/SELECTION buttons. Control can also be exercised by assigning this setting to a USER button.

## Focus assist setting

From the [SETUP] menu, select [SW LINK] and display [FASIST]. Then set On or Off.



When "On" is selected as the item setting, the images on the multi view display output by the switcher are switched to the images of the remote camera selected by the unit. Control can also be exercised by assigning this setting to a USER button.



## Camera information setting

From the [SETUP] menu, select [SW LINK] and display [CAMSEL]. Then set On or Off.



When "On" is selected as the item setting, an icon appears at the bottom left of the image of the remote camera selected by the unit on the switcher's multi view display. When a remote camera has been selected, its information is sent from the unit to the switcher.

# Linking the unit with the switcher

## OA tally setting

From the [SETUP] menu, select [SW LINK] and display [TALLY\_IP]. Then set On or Off.



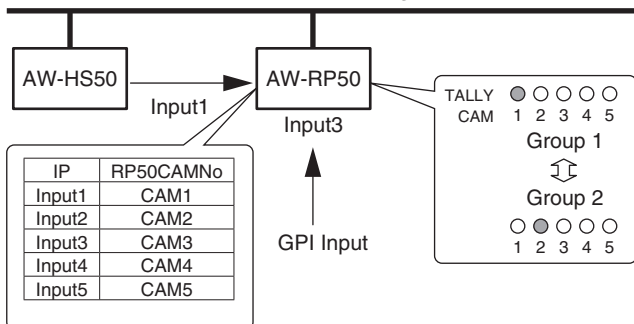
When “On” is selected as the item setting, the unit receives the tally information (tally ON/OFF) sent periodically from the switcher through the network, and it sends the ON or OFF instruction to the remote cameras in which changes have occurred.

### [Concerning the tally information transferred through the network]

After receiving the tally information (Input1 to Input5) from the switcher through the network, the unit sends the ON or OFF instruction to the remote cameras.

Based on the relationship between the image output (remote camera) and image input (switcher) which have been set using the unit's menu, the remote camera to which the tally instruction is sent in response to the tally information received from the switcher is identified, the tally indicator of that remote camera is lighted in red, and the tally ON instruction is sent to the remote camera.

The Tally ON instruction is also sent to the remote cameras which are not in the selected camera group.



In response to inputs 1 to 5 from GPI Input, tally indicators CAM1 to CAM5 are lighted in red, and the tally ON instruction is sent to the remote cameras concerned. Only CAM1 to CAM5 serve as the GPI Input tally. This means that when a camera group other than No.1 is selected, the tally indicators will go off.

The following tally-related settings can be established using the menu.

- **Enabling/disabling the tally information instructions sent over the network**

If only the tally information from GPI is to be enabled, from the [SETUP] menu select [SW LINK], set [TALLY-IP] to Off, and disable the tally information instructions sent over the network.

- **Enabling/disabling the tally ON instructions sent to the remote cameras**

From the [CAMERA] menu, select [TALLY] and display [TALLY]. Then set enable or disable for the tally ON instructions to be sent to the remote cameras in response to the tally requests from the GPI and over the network.

## PAN/TILT lever control setting

This setting makes it possible to use the unit's PAN/TILT lever as the switcher's control lever.

From the [SETUP] menu, select [SW LINK] and display [CAMSEL]. Then set Self/SW.



When “Self” has been selected as the setting, the unit's PAN/TILT lever is used as the lever for operating the pan and tilt functions of the remote cameras.

When “SW” has been selected, the following information is sent to the switcher.

**PAN/TILT lever:** X, Y speed

**ZOOM button:** Size speed



# Linking the unit with the switcher

## ■ Setting for the information to be displayed on the OSD

This setting displays the remote camera information on the OSD of the monitor which is connected to the switcher to be linked to the unit.

The setting is established using the [SETUP] menu. Before taking the steps here, the steps for “Switcher network settings” and “Setting the image output and image input” described earlier must be taken.

First, the basic menu operations will be described.

### 1 Set the MENU button to ON.

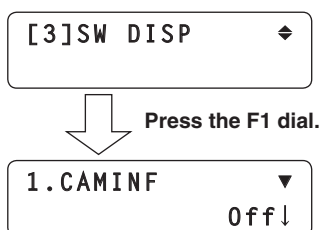
Press the MENU button to light its indicator.

### 2 Set PRESET MEMORY/MENU 9 button (SETUP) to ON.

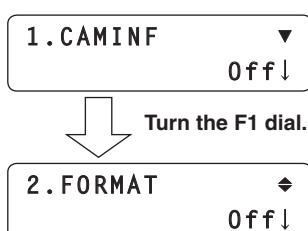
When the button is pressed and its indicator is lighted, the [SETUP] menu is displayed on the LCD panel.



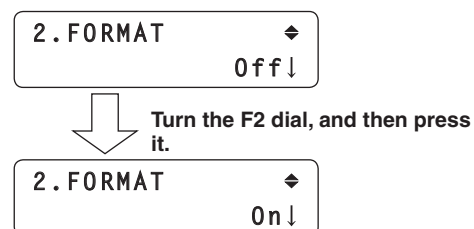
### 3 Turn the F1 dial to display the SW DISP menu, and press the F1 dial.



### 4 Turn the F1 dial to and select the menu item to be set.



### 5 Turn the F2 dial to select On or Off, and then press the F2 dial to enter the selection



## ● Setting all the information displays together

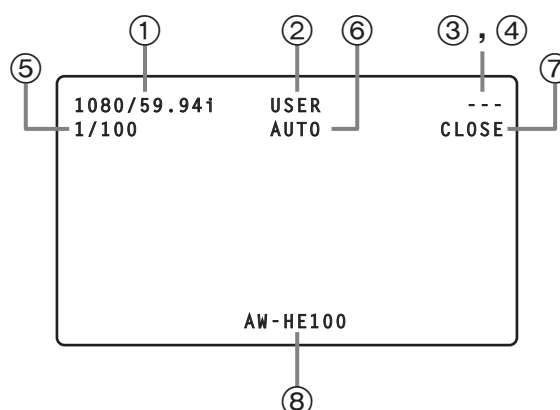
From the [SETUP] menu, select [SW DISP] and display [CAMINF]. Then set On or Off.



When “On” is selected as the item setting, the information of the remote cameras set in “Setting the image output and image input” is sent to the switcher.

Control can also be exercised by assigning this setting to a USER button.

- ① Video format
- ② Scene file name (shooting mode)
- ③ Filter information
- ④ Remote camera alarm information
- ⑤ Shutter information (ON/OFF, shutter value)
- ⑥ Gain value
- ⑦ Iris value
- ⑧ Remote camera name (displayed with up to 10 characters)



# Linking the unit with the switcher

## ● Setting each information item to be displayed

### ■ Video format

From the [SETUP] menu, select [SW DISP] and display [FORMAT]. Then set On or Off.

2. FORMAT   
Off↓

### ■ Remote camera name

From the [SETUP] menu, select [SW DISP] and display [CAMNAME]. Then set On or Off.

3. CAMNAME   
Off↓

### ■ Scene file name

From the [SETUP] menu, select [SW DISP] and display [SCENE]. Then set On or Off.

4. SCENE   
Off↓

### ■ Gain value

From the [SETUP] menu, select [SW DISP] and display [GAIN]. Then set On or Off.

5. GAIN   
Off↓

### ■ Shutter information

From the [SETUP] menu, select [SW DISP] and display [SHUTTER]. Then set On or Off.

6. SHUTTER   
Off↓

### ■ Iris value

From the [SETUP] menu, select [SW DISP] and display [IRIS]. Then set On or Off.

7. IRIS   
Off↓

### ■ Filter information

From the [SETUP] menu, select [SW DISP] and display [FILTER]. Then set On or Off.

8. FILTER   
Off↓

### ■ Remote camera alarm information

From the [SETUP] menu, select [SW DISP] and display [ALARM]. Then set On or Off.

9. ALARM   
Off↓

# Checking the equipment alarm information

It is possible to check the alarm statuses of the unit and the remote cameras assigned to the CAMERA STATUS/SELECTION buttons.

## 1 Set the MENU button to ON.

Press the MENU button to light its indicator.

## 2 Set PRESET MEMORY/MENU 10 button (SYSTEM) to ON.

When the button is pressed and its indicator is lighted, the [SYSTEM] menu is displayed on the LCD panel.

[1]CAMERA CTL ▼

## 3 Turn the F1 dial to display the ALARM menu, and press the F1 dial.

[8]ALARM ◆



Press the F1 dial.

1 . POWER ▼  
NO ALARM↓

The unit's power supply alarm can be checked.

### NO ALARM:

When the power supply is trouble-free

### ALARM:

When trouble has occurred in the power supply

- When an alarm has occurred, stop operation immediately, and be absolutely sure to contact your dealer. Continued use may cause the unit to malfunction.

## 4 Turn the F2 dial to display the remote camera item.

The target device is displayed at the top, and the alarm status is displayed underneath.

1 . POWER ▼  
NO ALARM↓



Turn the F2 dial.

2 . CAM1 ◆  
FAN ALM↓

The alarm statuses of the remote cameras currently assigned to the CAMERA STATUS/SELECTION buttons are displayed.

### NO ALARM:

The power supply is trouble-free.

### ALARM:

Trouble has occurred in the power supply.

### FAN ALM:

Trouble has occurred in the cooling fan.

### P/T ERR:

Trouble has occurred in the pan/tilt operation.

### FAN+P/T ERR:

Trouble has occurred in the cooling fan and pan/tilt operation.

- When an alarm has occurred, stop operation immediately, and be absolutely sure to contact your dealer. Continued use may cause the unit to malfunction.

# Returning the unit to its factory status

---

The unit's settings can be returned to the factory statuses. Two methods can be used: One method returns all the settings to the factory statuses, and the other returns only the [SETUP] menu settings to the factory statuses.

## 1 Set the MENU button to ON.

Press the MENU button to light its indicator.

## 2 Set PRESET MEMORY/MENU 10 button (SYSTEM) to ON.

When the button is pressed and its indicator is lighted, the [SYSTEM] menu is displayed on the LCD panel.

[1]CAMERA CTL ▼

## 3 Turn the F1 dial to display the INITIALIZE menu, and press the F1 dial.

[9]INITIALIZE ◆



Press the F1 dial.

1. INITIALIZE

ALL↓

## 4 Turn the F2 dial to select the initializing mode.

1. INITIALIZE

ALL↓



Turn the F2 dial.

1. INITIALIZE

SETUP↓

### ALL:

All the settings are returned to the factory statuses.

### SETUPSETTING:

Only the [SETUP] menu settings are returned to the factory statuses.

## 5 Press the F2 dial to initialize the settings.

# Control interface for external devices

## TALLY/GPI

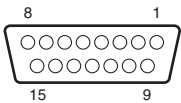
TALLY1 to TALLY4 are contact input ports which are used to light the unit's TALLY indicators.

The TALLY lamps light with contact input.

GPI\_In1 to GPI\_In4 are contact input ports which are used to control the unit from an external source.

GPI\_Out1 to GPI\_Out4 are open output ports which are used to output the statuses to an external source.

D-sub 15-pin, female, inch thread



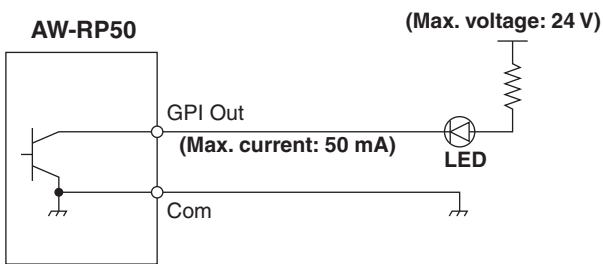
Pin No.	Signal	Description of signal	Operation
1	TALLY 1	CAM1 tally input	Contact input
9	TALLY 2	CAM2 tally input	
2	TALLY 3	CAM3 tally input	
10	TALLY 4	CAM4 tally input	
3	TALLY 5	CAM5 tally input	
11	GND	GND	
4	GPI_In 1	Preset input 1	Contact input
12	GPI_In 2	Preset input 2	
5	GPI_In 3	Preset input 3	
13	GPI_In 4	Panel lock	
6	GPI_Out 1	Remote camera selection 0	Open collector output
14	GPI_Out 2	Remote camera selection 1	
7	GPI_Out 3	Remote camera selection 2	
15	GPI_Out 4	Alarm	
8	NC	Not used	

### Example of GPI\_Out connections

Ensure that the conditions given below are satisfied.

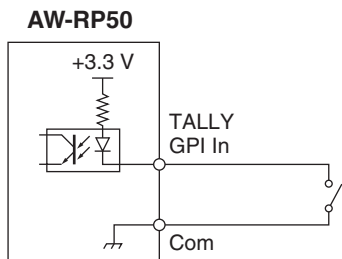
Dielectric strength: Max. DC 24 V

Current: Max. 50 mA



### Example of TALLY and GPI\_In connections

Provide contact inputs.



# RP setting tool

## ■ Installing the software

Be absolutely sure to read through the “Readme.txt” on the CD-ROM supplied with the unit first before attempting to install the software.

### Software provided on the CD-ROM

#### ● RP50PCTOOL

This is used to set the network environment for operating the remote camera using the host computer.

It can save the setting data files in the host computer, and it can load the saved files and reflect them in the network environment.

For details, refer to the sections that follow.

## ■ IP settings

On the “Setting” tab screen, set the IP addresses of the remote cameras and switcher.

The screenshot shows the RP50PCTOOL application window with the 'Setting' tab selected. At the top, there is a dropdown menu labeled 'RP1'. Below it is a table with columns: Type, Group, CAMERA No, Type, CAMERA Name, SW Input, MAC Address, IP Address, CAMERA Select, and Alarm. The table is divided into three sections: CAMERA 1 (rows C001-C005), CAMERA 2 (rows C006-C010), and CAMERA 3 (rows C011-C015). Each row has a 'Type' dropdown set to 'NoAssign', a 'CAMERA Name' dropdown set to 'スタディック', a 'SW Input' dropdown, a 'MAC Address' field set to '00:00:00:00:00:00', an 'IP Address' field set to '0 . 0 . 0 . 0', a 'CAMERA Select' dropdown, and an 'Alarm' dropdown set to 'スタディック'. At the bottom of the window, there are six buttons: RENEW, KEEP, SET, CANCEL, ALL CLEAR, and REFRESH.

Type	Group	CAMERA No	Type	CAMERA Name	SW Input	MAC Address	IP Address	CAMERA Select	Alarm
CAMERA	1	C001	NoAssign	スタディック		00:00:00:00:00:00	0 . 0 . 0 . 0		スタディック
		C002	NoAssign	スタディック		00:00:00:00:00:00	0 . 0 . 0 . 0		スタディック
		C003	NoAssign	スタディック		00:00:00:00:00:00	0 . 0 . 0 . 0		スタディック
		C004	NoAssign	スタディック		00:00:00:00:00:00	0 . 0 . 0 . 0		スタディック
		C005	NoAssign	スタディック		00:00:00:00:00:00	0 . 0 . 0 . 0		スタディック
	2	C006	NoAssign	スタディック		00:00:00:00:00:00	0 . 0 . 0 . 0		スタディック
		C007	NoAssign	スタディック		00:00:00:00:00:00	0 . 0 . 0 . 0		スタディック
		C008	NoAssign	スタディック		00:00:00:00:00:00	0 . 0 . 0 . 0		スタディック
		C009	NoAssign	スタディック		00:00:00:00:00:00	0 . 0 . 0 . 0		スタディック
		C010	NoAssign	スタディック		00:00:00:00:00:00	0 . 0 . 0 . 0		スタディック
	3	C011	NoAssign	スタディック		00:00:00:00:00:00	0 . 0 . 0 . 0		スタディック
		C012	NoAssign	スタディック		00:00:00:00:00:00	0 . 0 . 0 . 0		スタディック
		C013	NoAssign	スタディック		00:00:00:00:00:00	0 . 0 . 0 . 0		スタディック
		C014	NoAssign	スタディック		00:00:00:00:00:00	0 . 0 . 0 . 0		スタディック
		C015	NoAssign	スタディック		00:00:00:00:00:00	0 . 0 . 0 . 0		スタディック
SW			NoAssign			00:00:00:00:00:00	0 . 0 . 0 . 0		

RENEW KEEP SET CANCEL ALL CLEAR REFRESH

# RP setting tool

## ● Auto IP setting

### ■ When IP addresses are to be changed

#### 1 Click [RENEW].

New IP addresses are set in the target remote cameras and switcher.

- When [CANCEL] is clicked, the original settings are restored.

#### 2 Check that the IP addresses of the remote cameras and switcher are displayed correctly, and click [SET].

The IP addresses which have been set now take effect.

### ■ When IP addresses are not going to be changed

#### 1 Click [KEEP].

The IP addresses of the target remote cameras and switch are displayed.

- When [CANCEL] is clicked, the original settings are restored.

#### 2 Check that the IP addresses of the remote cameras and switcher are displayed correctly, and click [SET].

The displayed IP addresses now take effect.

## ● Changing the IP addresses

The IP addresses of the remote cameras and switcher can be changed.

#### 1 Directly input the IP address of the device concerned into the [IPAddress] field.

#### 2 Click [SET].

The changed IP address now takes effect.

## ● Changing the camera numbers

The camera numbers set for the remote cameras can be changed.

#### 1 Change the camera number for the remote camera concerned in the [CAMERA Select] field.

#### 2 Click [SET].

The changed camera number now takes effect.

## ● Registering the camera numbers in the switcher's input connectors

Set the camera numbers to be registered for the input connectors (SDI IN 1 to SDI IN 4, DVI IN) of the switcher.

#### 1 Select the camera numbers to be registered in the [SW Input] field.

SW Input display	Input connector of switcher
Input1	SDI IN 1
Input2	SDI IN 2
Input3	SDI IN 3
Input4	SDI IN 4
Input5	DVI IN

#### 2 Click [SET].

The registration of the camera numbers into the input connectors of the switcher now takes effect.

# ***RP setting tool***

---

## **●Alarm displays**

The alarms of the remote cameras (5 units) are displayed in the [Alarm] field.

They are displayed for the remote cameras in the currently selected group.

For remote cameras with a serial connection, they are displayed only when the cameras are selected.

## **●Displaying the camera names**

The names set for the remote cameras (5 units) are displayed.

They are displayed for the remote cameras in the currently selected group.

For remote cameras with a serial connection, they are displayed only when the cameras are selected.

## **●Initializing the IP addresses**

The set IP addresses are initialized when [ALL CLEAR] is clicked.

## **●Acquiring information**

When [REFRESH] is clicked, the latest information of the remote cameras and switcher is acquired, and displayed in the "Setting" tab.

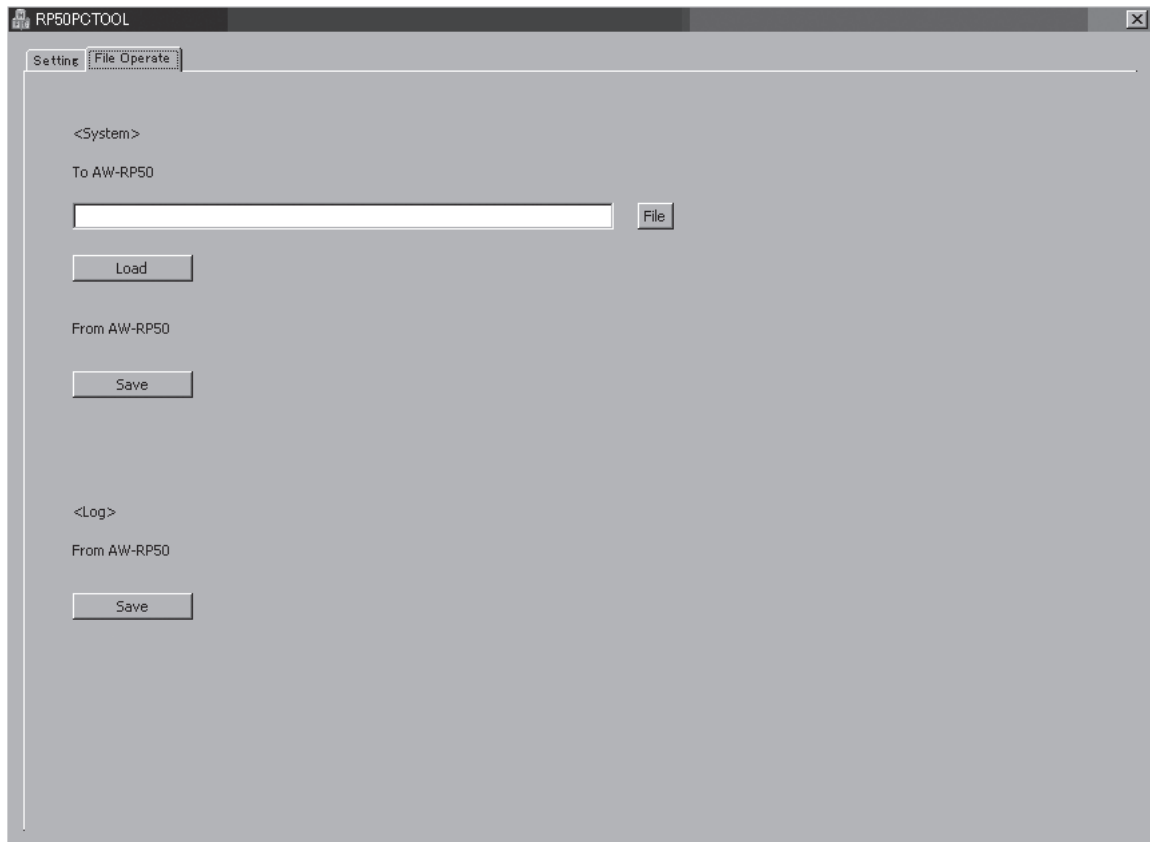


# RP setting tool

---

## ■ Saving and loading data

On the “File Operate” tab screen, the files with the network environment settings are saved and loaded.



## ● Saving the setting files

Save the files with the network environment setting data.  
(Filename: \*\*\*.r50)

- 1 In the <System> section, click [Save] under “From AW-RP50”.**  
The file save screen now appears.

- 2 Input the filename, and click [Save].**  
When the file has been saved, the following message is displayed.

# RP setting tool

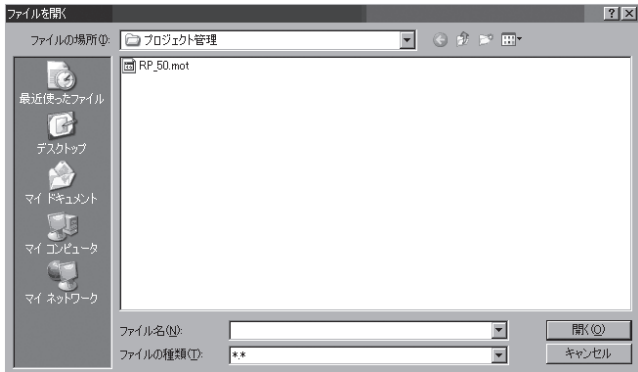
---

## ● Loading the setting files

Load the files with the network environment setting data.  
(Filename: \*\*\*.r50)

### 1 Click [File].

The file selection screen now appears.



### 2 Select the file, and click [Open].

The filename is displayed under "To AW-RP50".

### 3 Click [Load].

When the file has been loaded, the following message is displayed.

## ● Saving the log files

Save the log files.  
(Filename: RP50.log)

### 1 In the <Log> section, click [Save] under "From AW-RP50".

The file save screen now appears.

### 2 Input the filename, and click [Save].

When the file has been saved, the following message is displayed.

## Table of menu items

Button	Menu item	Control device	Initial value	Setting
1	GAIN/PED	GAIN	AW-HE50	Auto, 0dB, 3dB, 6dB, 9dB, 12dB, 15dB, 18dB
			AW-HE100	AUTO, 0 to 12dB, 15dB, 18dB (0dB to 12dB: 1 step)
			AW-HE870	AUTO, -6dB to 18dB (1 step)
			AW-E860, AW-E750, AW-E650, AW-E350	AUTO, 0 to 30dB, N/Eye L, N/Eye, N/Eye H
			AK-HC1500, AK-HC1800	LOW, MID, HIGH, S.GAIN1, S.GAIN2, S.GAIN3
		PEDESTAL	AW-HE50	-10 to +10
			AW-HE100	-30 to +30
			AW-HE870	-150 to +150
			AW-E860, AW-E750, AW-E650, AW-E350	-150 to +150
			AK-HC1500, AK-HC1800	-150 to +150
2	R/BGAIN	RGAIN	AW-HE50	“---”
			AW-HE100	-30 to +30
			AW-HE870	-150 to +150
			AW-E860, AW-E750, AW-E650, AW-E350	-150 to +150
			AK-HC1500, AK-HC1800	-200 to +200
	BGAIN		AW-HE50	“---”
			AW-HE100	-30 to +30
			AW-HE870	-150 to +150
			AW-E860, AW-E750, AW-E650, AW-E350	-150 to +150
			AK-HC1500, AK-HC1800	-200 to +200
3	R/BPED	RPED	AW-HE50	“---”
			AW-HE100	“---”
			AW-HE870	-150 to +150
			AW-E860, AW-E750, AW-E650, AW-E350	-150 to +150
			AK-HC1500, AK-HC1800	-100 to +100
	BPED		AW-HE50	“---”
			AW-HE100	“---”
			AW-HE870	-150 to +150
			AW-E860, AW-E750, AW-E650, AW-E350	-150 to +150
			AK-HC1500, AK-HC1800	-100 to +100
4	AWB/ABB	AWB SEL	AW-HE50	AWB A, AWB B, ATW
			AW-HE100	AWB A, AWB B, 3200K, 5600K, ATW
			AW-HE870	AWB A, AWB B, 3200K, 5600K, ATW
			AW-E860, AW-E750, AW-E650, AW-E350	AWB A, AWB B, 3200K, 5600K, ATW
			AK-HC1500, AK-HC1800	“---”
		SET		AWB, ABB

## Table of menu items

Button	Menu item		Control device	Initial value	Setting
5	SHUTTER	SHUTTER	AW-HE50		Off, Step, Synchro
			AW-HE100		Off, Step, Synchro
			AW-HE870		Off, Step, Synchro, ELC
			AW-E860, AW-E750, AW-E650, AW-E350		Off, Step, Synchro, ELC
			AK-HC1500, AK-HC1800		Off, Step, Synchro
		SPEED	AW-HE50		1/100(NTSC), 1/120(PAL), 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000
			AW-HE100		1/100(NTSC), 1/120(PAL), 1/250, 1/500, 1/1000, 1/2000
			AW-HE870		1/100(NTSC), 1/120(PAL), 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000
			AW-E860, AW-E750, AW-E650, AW-E350		1/100(NTSC), 1/120(PAL), 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000
			AK-HC1500, AK-HC1800		VIDEO: 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000(s)  FILME: 180.0, 172.8, 144.0, 120.0, 90.0, 45.0(deg)
6	DETAIL	DETAIL			Off, 0n
		LEVEL	AW-HE50		LOW, HIGH
			AW-HE100		0 to 14
			AW-HE870		LOW, HIGH
			AW-E860, AW-E750, AW-E650, AW-E350		LOW, HIGH
			AK-HC1500, AK-HC1800		-31 to +31
7	SCENE/MODE	SCENE	AW-HE50		F-AUTO, MANU1, MANU2, MANU3
			AW-HE100		HALOGEN, FLUORE, DAYLIGHT, USER
			AW-HE870		HALOGEN, FLUORE, OUTDOOR, USER
			AW-E860, AW-E750, AW-E650, AW-E350		HALOGEN, FLUORE, OUTDOOR, USER
			AK-HC1500, AK-HC1800		CURRENT, PRESET, USER1, USER2
		MODE			BAR, CAM
8	CAMERA	GROUP	GROUP SELECT	1	1 to 20
		POWER	CAM POWER	GROUP ON	GROUP OFF, GROUP ON, ALL OFF, ALL ON
			AUTO ON	Off	Off, 0n
		TALLY	TALLY OUT	Off	Off, 0n

# Table of menu items

Button	Menu item		Control device	Initial value	Setting
9	SETUP	USER	USER1	AWB	SWLINK, BUSCONT, FASIST, CAMSEL, TALLY, CAMINF, AWB, ABB, POWER OFF
			USER2	ABB	SWLINK, BUSCONT, FASIST, CAMSEL, TALLY, CAMINF, AWB, ABB, POWER OFF
		SW LINK	SWLINK	Off	Off, On
			BUSCONT	Off	Off, On
			BUS	AUX	AUX, PVW, PinP, KEY
			FASIST	Off	Off, On
			CAMSEL	Off	Off, On
			TALLY_IP	Off	Off, On
			P/T LEVER		Self, SW
		SW DISP	CAMINF	Off	Off, On
			FORMAT	Off	Off, On
			CAMNAME	Off	Off, On
			SCENE	Off	Off, On
			GAIN	Off	Off, On
			SHUTTER	Off	Off, On
			IRIS	Off	Off, On
			FILTER	Off	Off, On
			ALARM	Off	Off, On
		OPERATE	PAN DIR	NORMAL	NORMAL, REVERSE
			TILT DIR	NORMAL	NORMAL, REVERSE
			ZOOM DIR	NORMAL	NORMAL, REVERSE
			FOCUS DIR	NORMAL	NORMAL, REVERSE
			SPEED WITH Z	AW-HE50	Off, On
				AW-HE100	Off, 1, 2
				AW-PH360, AW-PH400, AW-PH405, AW-PH650	Off, 1, 2
			SPEED TARGET	P/T/Z/F	P/T/Z/F, P/T
			FOCUS/IRIS		STANDARD, EXCHANGE, NORMAL, REVERSE
			P/T CURV		1 to 10
		PRESET	DIAG SPEED		1 to 30
			SCOPE	AW-HE50	MODE A, MODE B, MODE C
				AW-HE100	“---”
				AW-PH360, AW-PH400, AW-PH405, AW-PH650	“---”
			HOME POSITION	SET	SET
		FUNCTION	ND FILTER	AW-HE50	Off, On
				AW-HE100	Off, On
				AW-HE870	Off, On
				AW-E860, AW-E750, AW-E650, AW-E350	Off, On
				AK-HC1500, AK-HC1800	Clear, 1/4, 1/16, 1/64
			OPTION	Off	Off, On
			DEFROSTER	Off	Off, On
			WIPER	Off	Off, On
			HEATER/FAN	Off	Off, On
			LAMP	Off	Off, On

## Table of menu items

Button	Menu item		Control device	Initial value	Setting
9	SETUP	PTZ ADJ	P/T MIN SPEED		START
			Z MIN SPEED		0 to
			LIMIT UP	AW-HE50	Off
				AW-HE100	EXEC
				AW-PH360, AW-PH400, AW-PH405, AW-PH650	EXEC
			LIMIT DOWN	AW-HE50	Off
				AW-HE100	EXEC
				AW-PH360, AW-PH400, AW-PH405, AW-PH650	EXEC
			LIMIT LEFT	AW-HE50	Off
				AW-HE100	EXEC
				AW-PH360, AW-PH400, AW-PH405, AW-PH650	EXEC
			LIMIT RIGHT	AW-HE50	Off
				AW-HE100	EXEC
				AW-PH360, AW-PH400, AW-PH405, AW-PH650	EXEC
		GPI	EMERGENCY MD1		1 to 100
			EMERGENCY MD2		1 to 100
			EMERGENCY MD3		1 to 100
		LCD BL	BACKLIGHT	On	Off, On
		MENU CTL	MENU CONTROL	DISABLE	ENABLE, DISABLE
10	SYSTEM	CAMERA CTL	CAM1 to 100	NoAssign	Serial, Network, NoAssign
		CAM ASSIGN	CAM1 to 100		192.168.000.020
		SW ASSIGN	INPUT1		CAM1 to 100
			INPUT2		CAM1 to 100
			INPUT3		CAM1 to 100
			INPUT4		CAM1 to 100
			INPUT5		CAM1 to 100
		AUTO SET IP	AUTO SETUP	RENEW	RENEW, KEEP, ALL CLEAR
		NETWORK	IP ADDRESS	192.168.000.009	
			SUBNETMASK	255.255.255.000	
			GATEWAY	000.000.000.000	
			MAC ADDRESS		Display only
		CAM IP ADR	IP:CAM1 to 100	192.168.000.020	
		SW IP ADR	IP:SW	192.168.000.030	
		ALARM	POWER		ALARM, NO ALARM
			CAM*** (Note)		FAN ALM, P/T ERR, FAN ALM+P/T ERR
			CAM*** (Note)		FAN ALM, P/T ERR, FAN ALM+P/T ERR
			CAM*** (Note)		FAN ALM, P/T ERR, FAN ALM+P/T ERR
			CAM*** (Note)		FAN ALM, P/T ERR, FAN ALM+P/T ERR
			CAM*** (Note)		FAN ALM, P/T ERR, FAN ALM+P/T ERR
		INITIALIZE	INITIALIZE		ALL, SETUP
		VERSION	SYSTEM VER		V**.*.*
			PROGRAM VER		V**.*.*
			FPGA VER		V**.*.*

**Note:** "\*\*\*" is the number of the camera in the selected group of cameras.



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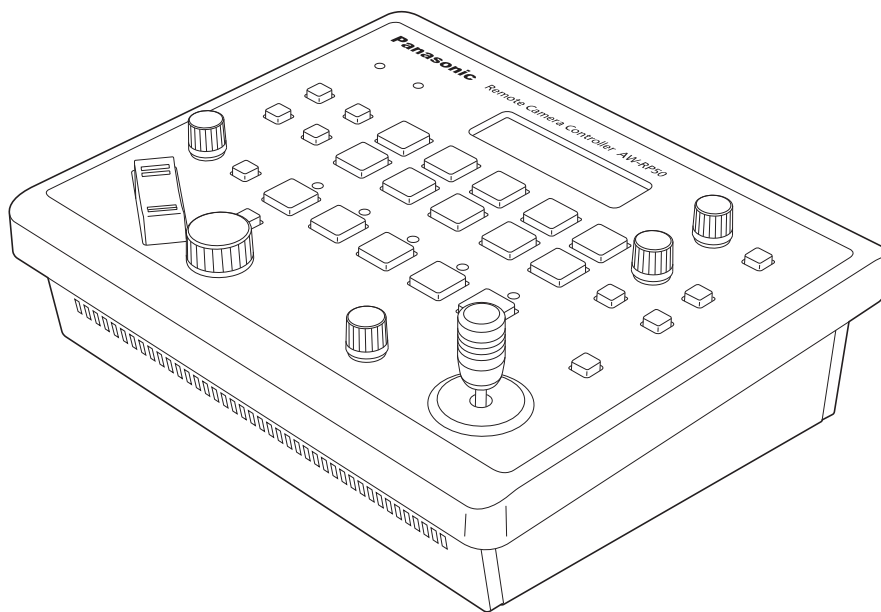


# Operating Instructions <Basics>

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## Remote Camera Controller

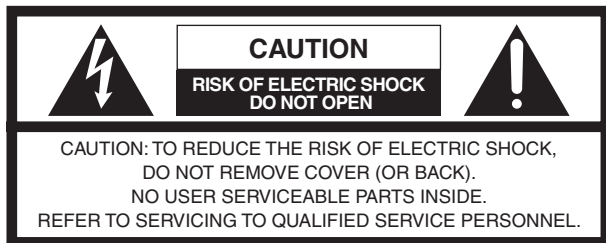
Model No. **AW-RP50N**



Before operating this product, please read the instructions carefully and save this manual for future use.



# Safety precautions



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (service) instructions in the literature accompanying the appliance.

## WARNING:

### ■ THIS APPARATUS MUST BE EARTHED

To ensure safe operation, the three-pin plug must be inserted only into a standard three-pin power point which is effectively earthed through the normal household wiring.

Extension cords used with the apparatus must have three cores and be correctly wired to provide connection to the earth. Wrongly wired extension cords are a major cause of fatalities.

The fact that the apparatus operates satisfactorily does not imply that the power point is earthed or that the installation is completely safe. For your safety, if you are in any doubt about the effective earthing of the power point, please consult a qualified electrician.

— For CANADA —

**This class A digital apparatus complies with Canadian ICES-003.**

**Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.**

## WARNING:

- TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.
- THE APPARATUS SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING AND THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.

## CAUTION:

**TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.**

### FCC Note:

This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

### Warning:

To assure continued FCC emission limit compliance, the user must use only shielded interface cables when connecting to external units. Also, any unauthorized changes or modifications to this equipment could void the user's authority to operate it.

## CAUTION:


**In order to maintain adequate ventilation, do not install or place this unit in a bookcase, built-in cabinet or any other confined space. To prevent risk of electric shock or fire hazard due to overheating, ensure that curtains and any other materials do not obstruct the ventilation.**

The socket outlet shall be installed near the equipment and easily accessible or the mains plug or an appliance coupler shall remain readily operable.

A warning that an apparatus with CLASS I construction shall be connected to a MAINS socket outlet with a protective earthing connection.

## IMPORTANT SAFETY INSTRUCTIONS

Read these operating instructions carefully before using the unit. Follow the safety instructions on the unit and the applicable safety instructions listed below. Keep these operating instructions handy for future reference.

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over. 
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

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## How the model's Operating Instructions manuals are configured

- The manual of this remote camera controller (hereafter, "the unit") is divided into two manuals: one is the <Basics> (this manual), and the other is the <Operations and Settings> (CD-ROM).  
Before installing the unit, be sure to read the <Basics> to ensure that the unit is installed correctly.
- This manual explains how to install the unit, and it details the network connection and setting procedures.  
For details on how to operate the unit and select its settings, refer to the "Operating Instructions <Operations and Settings>" (PDF file) on the CD-ROM supplied with the unit.  
To read PDF files, you will need Adobe® Reader® which is available from Adobe Systems.

# Before use

---

## ■ Overview

This unit is a controller which is designed to control remote cameras (cameras integrated with pan-tilt heads) and pan-tilt head systems (which consist of pan-tilt heads and the cameras which are mounted on them).

By means of an IP connection, an operating environment where the unit is tied in with the AW-HE50 HD integrated camera and AW-HS50 compact live switcher is achieved. When IP connections are used, the unit can be used to control up to 100 cameras.

When serial connections are used, up to five remote cameras and pan-tilt head systems can be controlled.

## ■ Concerning the Operating Instructions

- For the purposes of these instructions, AW-RP50N is referred to as “AW-RP50”. Similarly, “AW-HE50HN” and “AW-HE50SN” are referred as “AW-HE50,” and AW-HS50N is referred to as “AW-HS50”.
- In these instructions, the phrases “pan-tilt head and camera combination” and “camera integrated with a pan-tilt head” are both referred to collectively as “**remote camera**” except in places where specific equipment is mentioned.

## ■ Trademarks and registered trademarks

- Microsoft, Windows, Windows Vista and Internet Explorer are the registered trademarks or trademarks of Microsoft Corporation of the United States in the United States, Japan and other countries.
- Adobe and Reader are the registered trademarks or trademarks of Adobe Systems Incorporated in the United States and other countries.
- Other names of companies or products appearing in the text are the registered trademarks or trademarks of the companies concerned.

## ■ Copyrights

It is forbidden to transfer, copy, reverse assemble, reverse compile or reverse engineer the software included in this unit or to engage in any act of exportation which contravenes the applicable export laws and regulations.

## ■ Concerning the ratings display

The unit's name, model number and electrical ratings are indicated on its bottom panel.

## ■ Disclaimer

Panasonic Corporation will accept absolutely no responsibility whatsoever when any of the following is applicable:

- ① Any accidental, special or consequential damages or harm caused either directly or indirectly in connection with the unit
- ② Any problems with or damage to the unit, etc. resulting from misuse, abuse or carelessness on the part of the user
- ③ When the user has disassembled, repaired or remodeled the unit
- ④ Any inconvenience, losses, damages or harm that result from the disability to display images as a result of some reason or cause including problems with or malfunctioning of the unit
- ⑤ Any problem caused by any system in which the unit is used in combination with the equipment of third parties or any inconvenience, damages or harm occurring as a result of such
- ⑥ Any inconvenience, damages or losses resulting from accidents caused by an inadequate installation method or any factors other than a defect in the product itself
- ⑦ Any losses of any registered information whatever may be the cause of those losses
- ⑧ Any damages, claims, etc. due to loss or leakage of the setting data saved on this unit or in a personal computer

## ■ Network-related precautions

This unit is connected to a network and used: As such, it may be susceptible to the following damage, harm or losses.

- ① Leakage or release of information via the unit
- ② Illegal operation of the unit by third parties with malicious intent
- ③ Interference with or shutdown of the unit by third parties with malicious intent

To prevent these kinds of damage, harm or losses, users are urged to take the following measures to ensure network security including, but not limited to, the following:

- The unit must be secured on the network by use of firewalls or other measures.
- When the unit is to be used in a system to which personal computers are connected, notification of virus protection and safe guards against illegal programs are to be implemented and periodically checked.
- Unit should be installed in a manner in which its cables and other accessories cannot be easily damaged.

# Characteristics

---

## Compact design

- The unit features a compact design with its half-rack size width (210 mm (8-1/4")) and its 4RU size (177 mm (6-15/16")) depth.  
The unit is the same size as the AW-HS50 compact live switcher (option), and when the switcher is placed alongside the unit, the two units are neatly housed in the full rack width.

## IP connection and serial connection supported

### IP connection

- Up to 100 remote cameras(\*1) can be controlled through a network hub.
- Using the unit's automatic IP setting function, the IP addresses of the remote cameras(\*1) and switcher(\*2) can be assigned and controlled automatically.
- Up to five units can be connected to the same network to control the remote cameras simultaneously.
- Using the setting software provided, the IP addresses of the remote cameras and pan-tilt head systems can be set and the initial settings of the unit can also be established from a personal computer.

\*1: Camera supported: AW-HE50  
\*2: Switcher supported: AW-HS50

### Serial connection

- Up to five remote cameras or pan-tilt head systems can be controlled.

## Easy to operate the cameras

- The pan, tilt, zoom, focus and iris operations of the cameras can be easily performed from the unit.
- The gain, shutter, detail, white balance and black balance adjustments can be performed on the unit's LCD menu. (The adjustment items and range differ depending on the cameras connected.)

## Easy to operate the preset memory data of the pan-tilt heads

- Up to 100 sets of preset memory data of the pan-tilt heads can be registered and then recalled later.

## Function for linkup with the switcher using IP connection

- By linking the unit with one AW-HS50 compact live switcher using an IP connection to make the connection between them, a highly efficient operating environment has been achieved.

### Camera information display

- The camera setting information (such as the lens iris and gain setting) imported by the unit can be shown at the switcher's AUX output or on the split-screen display multi view display.

### Tally information imported

- The switcher's ON AIR tally information is imported, and the tally indicators on the panel are lighted.

### Bus material selection

- The switcher's bus materials can be selected from the unit.  
By selecting the camera, these materials can be switched.

Control buses supported: AUX, PVW, PinP, KEY-F

Using a single-step action to operate one of these buttons, the switcher's multi view screen can be switched to a full-screen display on which to show the camera images. (Focus assist function)

Control buses supported: AUX

### Parameter changes

- Using the unit's PAN/TILT lever, the PinP position and other parameters of the switcher can be changed.

# Pan-tilt heads and cameras supported

■ Remote cameras supported (cameras integrated with a pan-tilt head)  
AW-HE100, AW-HE50

■ Pan-tilt heads supported  
AW-PH360, AW-PH405, AW-PH650, AW-PH400 (AW-IF400 required)

■ Cameras supported (must be combined with the pan-tilt head supported)  
AW-HE870, AW-E860, AW-E750, AW-E650, AW-E350, AK-HC1500, AK-HC1800

Notes

- Prior to use, be absolutely sure to set the movement ranges (limiters).
- When serial connections are used for the unit and remote cameras or pan-tilt head systems, the cables can be extended up to 1000 meters (3280 ft.).

In these instructions, the phrases “pan-tilt head and camera combination” and “camera integrated with a pan-tilt head” are both referred to collectively as “**remote camera**” except in places where specific equipment is referred to.

## Accessories

Check that the following accessories are present and accounted for.

Operating Instructions (this manual) .....	1	AC adapter .....	1
CD-ROM (operation manual and setting software).....	1	Power cable .....	1

## ***Required personal computer environment***

---

Run the software that is provided with the switcher on a host computer which satisfies the following specifications.

CPU	Intel® CoreTM2 DUO 2.4 GHz or faster recommended
Memory	512 MB or more
Network function	10Base-T or 100Base-TX
Image display function	Resolution: 800 × 600 pixels or more Color generation: True Color (24 bits, 32 bits)
Supported operating system	Microsoft® Windows® XP, Microsoft® Windows Vista®, Microsoft® Windows® 7
Hard disk drive	At least 50 MB of free memory

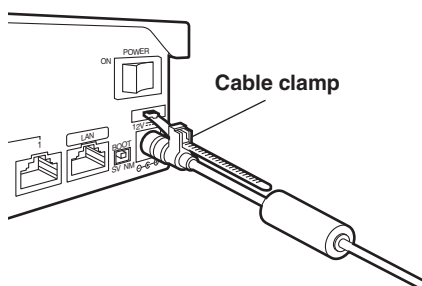
# Installation precautions

- In addition to heeding the points presented in the “Safety precautions”, observe the following precautions as well.

Be absolutely sure to ask your dealer to do the jobs of installing and connecting the unit.

## Connecting the power supply

- Use within AC 100 V to 120 V.
- Be absolutely sure to use only the power cord and AC adapter supplied with the panel.
- Be absolutely sure to connect the grounding terminal of the power cord to ground.
- Be absolutely sure to connect the ground terminal (SIGNAL GND) at the rear of the unit to the system ground.
- To prevent the DC plug from being disconnected, secure the cable of the AC adapter to the cable clamp.
- When the unit is not going to be used for a prolonged period of time, turn off its power, and disconnect the power plug from the AC outlet.



## Handle carefully!

- Dropping the unit or subjecting it to strong impact or vibration may cause trouble and/or malfunctioning.

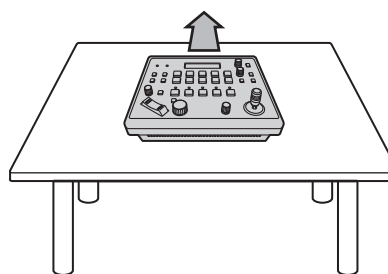
## Do not allow any foreign objects to enter inside the unit!

- Allowing water, metal items, scraps of food or other foreign objects inside the unit may cause a fire and/or electric shocks.

## Choosing the best installation location

- This unit is designed for indoor use only.
- Install the unit on a sufficiently strong, stable and level surface for use.
- Ensure a space of at least 100 mm (3-15/16") around the rear vents to avoid obstructing ventilation. In particular, ensure sufficient space between ventilation and wiring when using mounted in a panel or table.
- Do not install the unit in a cold place where the temperatures will drop below 0 °C (32 °F) or in a hot place where the temperatures will rise above 40 °C (104 °F).
- Avoid installing the unit where it will be exposed to direct sunlight or to the hot air that is blown out from other products.
- Installing the unit in a very humid, dusty or vibration-prone location may give rise to trouble.

Ventilation holes





# Operating precautions

---

## Handle carefully.

Do not drop the product, or subject it to strong shock or vibration.

Do not carry or move the product by the PAN/TILT lever. This is important to prevent trouble.

## Use the product in an ambient temperature of 0 °C to 40 °C (32 °F to 104 °F).

Avoid using the product at a cold place below 0 °C (32 °F) or at a hot place above 40 °C (104 °F) because extremely low or high temperature will adversely affect the parts inside.

## Power off before connecting or disconnecting cables.

Before plugging or unplugging the cables, be sure to switch power off.

## Avoid humidity and dust.

Avoid using the product at a humid, dusty place because much humidity and dust will cause damage to the parts inside.

## Maintenance

Wipe the product using a dry cloth. To remove stubborn dirt, dip a cloth into a diluted solution of kitchen detergent (neutral), wring it out well, and wipe the product gently. Then, after wiping the product with a moist cloth, wipe it again with a dry cloth.

### Caution

- Avoid using benzine, paint thinners and other volatile fluids.
- If a chemical cleaning cloth is to be used, carefully read through the precautions for its use.

## When the product is to be discarded

When the product is to be discarded at the end of its service life, ask a specialized contractor to dispose of it properly in order to protect the environment.

## Concerning the consumable parts

- AC adapter:

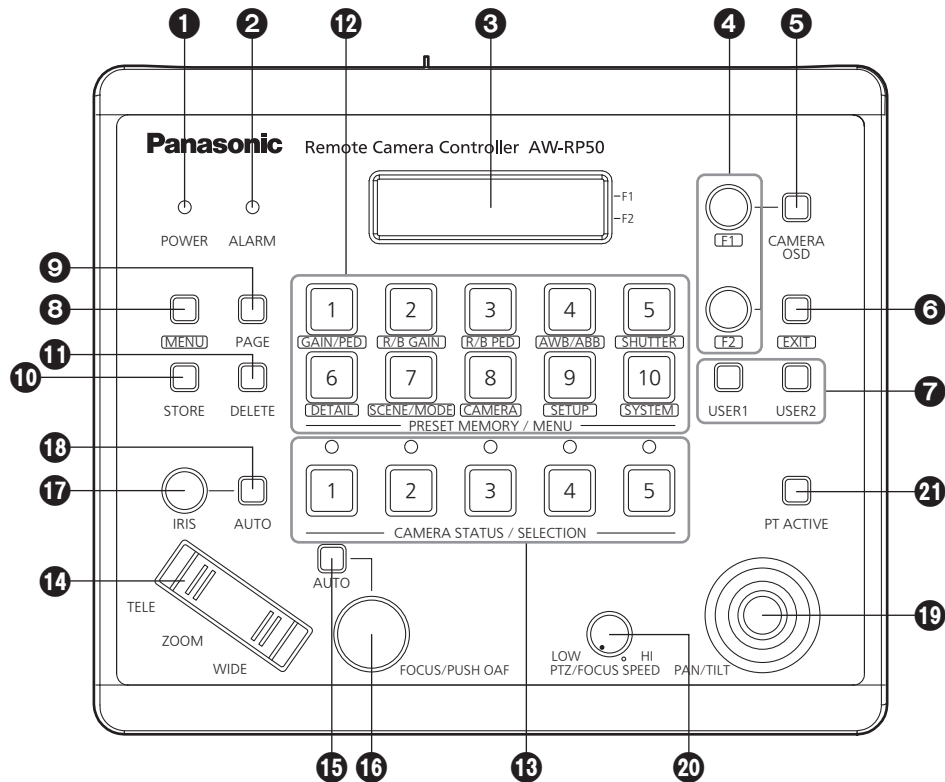
This is a consumable part. As a general rule, replace it every 5 years or so (when the unit has been operated for 15 hours a day).

The period when the consumable parts need to be replaced will differ depending on the operating conditions.

**When the time comes to replace one of these parts, be absolutely sure to ask your dealer to do the job.**

# Parts and their functions

## ■ Control panel



### ① POWER indicator [POWER]

This indicator lights when the POWER switch (22) on the rear panel is set to ON while power is supplied to the DC IN socket.

### ② ALARM indicator [ALARM]

This indicator lights when there is a problem with the power supply (voltage drop). It also lights when an alarm (a cooling fan alarm or pan/tilt error) has been received from a remote camera. The alarm information can be output to an external device from the unit's TALLY/GPI connector (25).  
 ⓘ For details, refer to "Checking the equipment alarm information" (<Operations and Settings> Instructions).  
 When the alarm indicator has lighted, stop using the unit immediately, and be absolutely sure to contact your dealer.

Continuing to use the unit even after an alarm has occurred may cause the unit to malfunction.

### ③ LCD panel

The current setting statuses are displayed on this panel.

### ④ F1 dial, F2 dial

These dials are turned to change the menu values, and they are pressed to enter the changes that have been made.

The F1 dial is used to operate the items displayed at the top of the LCD panel, and the F2 dial is used to operate the items displayed underneath.

What appears on the on-screen displays of the remote cameras and how operations are performed differ depending on the camera type.

ⓘ For details, refer to "Operating the menu items of the selected remote camera" (<Operations and Settings> Instructions).

# Parts and their functions

## ⑤ CAMERA OSD button [CAMERA OSD]

When the CAMERA OSD button is held down, its indicator lights, and the on-screen menu of the selected remote camera is displayed as the output image of the remote camera.

When the button is held down again while its indicator is lighted, the menu is cleared, and the indicator goes off.

## ⑥ EXIT button [EXIT]

Press this during menu operations to return to the previous hierarchical level.

## ⑦ USER buttons [USER1, USER2]

The functions of some of the setting items on the menus can be assigned to [USER1] and [USER2] to be recalled later.

For details, refer to “Setting the USER buttons” (<Operations and Settings> Instructions).

## ⑧ MENU button [MENU]

Press this to recall the menus using the PRESET MEMORY/MENU buttons (⑫). When it is pressed again while its indicator is lighted, the menu is cleared, and the indicator goes off.

### Button indicator ON:

The menu operations take effect.

### Button indicator OFF:

The menu operations have no effect.

For details, refer to “Basic operations for the menus”.

## ⑨ PAGE button [PAGE]

Press this to specify the preset memory of the remote camera.

When the button is pressed, its indicator lights, and the mode for selecting the page of the preset memory is established.

In this mode, press one of the PRESET MEMORY/MENU buttons (⑫), and specify the page number.

Next, specify the number on the page using one of the PRESET MEMORY/MENU buttons.

For details, refer to “Setting and operating the preset memories” (<Operations and Settings> Instructions).

## ⑩ STORE button [STORE]

Press this to register the preset memory data of the currently selected remote camera.

When it is pressed again while its indicator is lighted, the menu is cleared, and the indicator goes off.

### Button indicator ON:

The preset memory data registration mode is established.

### Button indicator OFF:

The preset memory data registration mode is released.

For details, refer to “Setting and operating the preset memories” (<Operations and Settings> Instructions).

## ⑪ DELETE button [DELETE]

Press this to delete the preset memory data for the currently selected remote camera.

When it is pressed again while its indicator is lighted, the menu is cleared, and the indicator goes off.

### Button indicator ON:

The preset memory data deletion mode is established.

### Button indicator OFF:

The preset memory data deletion mode is released.

For details, refer to “Setting and operating the preset memories” (<Operations and Settings> Instructions).

## ⑫ PRESET MEMORY/MENU buttons [PRESET MEMORY/MENU]

Use these buttons to recall the preset memory data and recall menus.

MENU button (⑧)	PAGE button (⑨)	When the PRESET MEMORY/MENU buttons are pressed
OFF	OFF	The data in preset memories 1 to 10 are recalled.
OFF	ON	The data in preset memories 11 to 100 are recalled.
ON	OFF	The menus are recalled.

## ⑬ CAMERA STATUS/SELECTION buttons [CAMERA STATUS/SELECTION]

Use these buttons to select up to five remote cameras.

### Button indicator ON:

The corresponding remote camera is selected.

### Button indicator OFF:

The selection of the corresponding remote camera is released.

Using the menu, up to 100 remote cameras can be divided into 1 to 20 groups, and then registered and controlled. The statuses of the remote cameras assigned to buttons 1 to 5 can be identified using the indicators positioned above the buttons.

For details, refer to “Selecting the remote cameras to be operated”.

## ⑭ ZOOM button [ZOOM]

Use this to adjust the lens zoom.

### When the TELE end is pressed:

Telephoto setting

### When the WIDE end is pressed:

Wide-angle setting

The zooming speed changes depending on the extent to which the button is pressed.

# Parts and their functions

---

## 15 Auto focus button [AUTO]

Press this to control the focus automatically.

### Button indicator ON:

Auto focusing

### Button indicator OFF:

Manual focusing

During auto focusing, operating the FOCUS/PUSH OAF dial (16) will have no effect.

## 16 FOCUS/PUSH OAF dial [FOCUS/PUSH OAF]

Use this to control the focus manually.

When the dial is pressed, auto focusing is initiated temporarily, and the subject being shot is brought into focus.

During auto focusing (while the indicator of the auto focus button (15) is lighted), operating this dial will have no effect.

## 17 IRIS dial [IRIS]

Use this dial to control the lens iris manually.

### When it is turned clockwise:

The lens iris opens more and more.

### When it is turned counterclockwise:

The lens iris closes more and more.

During auto focusing (while the indicator of the auto iris button (18) is lighted), operating this dial will have no effect.

## 18 Auto iris button [AUTO]

Press this to control the lens iris automatically.

### Button indicator ON:

Auto iris

### Button indicator OFF:

Manual iris

During auto iris, operating the iris dial (17) will have no effect.

## 19 PAN/TILT lever [PAN/TILT]

Use this lever to control the direction of the remote cameras.

### When it is leaned toward the left or right:

The cameras move to the left or right.

### When it is leaned toward you or away from you:

The cameras move up or down.

The movement speed differs depending on the angle to which the lever is moved.

## 20 PTZ/FOCUS SPEED dial [PTZ/FOCUS SPEED]

Use this dial to adjust the speed at which the operations (pan, tilt, zoom, focus) of the remote cameras are controlled.

### When it is turned clockwise:

Operation at a higher speed

### When it is turned counterclockwise:

Operation at a lower speed

## 21 PT ACTIVE button [PT ACTIVE]

Press this to switch between enabling and disabling the PAN/TILT lever operations.

### Button indicator ON:

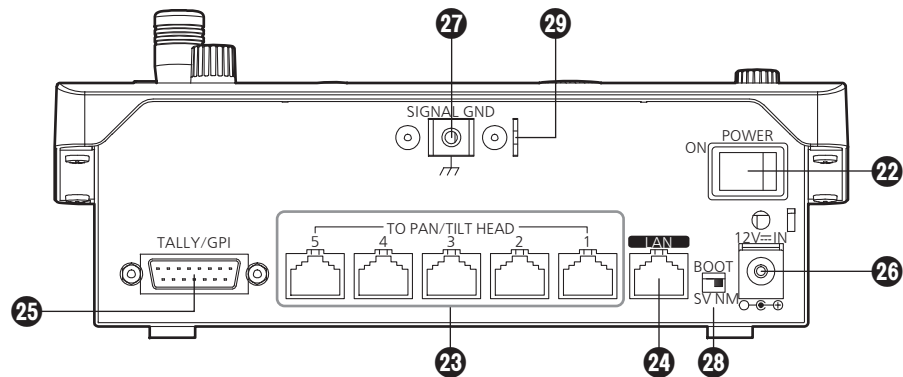
The PAN/TILT lever operations take effect

### Button indicator OFF:

The PAN/TILT lever operations have no effect.

# Parts and their functions

## ■ Rear panel



### 22 POWER switch [POWER]

When the POWER switch is set to the ON position, the POWER indicator (1) lights, and the unit can be operated.

### 23 TO PAN/TILT HEAD 1 to 5 connectors [TO PAN/TILT HEAD 1-5] (RJ-45)

Connect the remote cameras to these connectors using straight cables (category 5).

### 24 LAN connector [LAN] (RJ-45) (10BaseT/100BaseTX)

Connect the remote camera, switcher or host computer that supports IP connections to this connector using a LAN cable.

When directly connecting a device to the unit, use a crossover cable (category 5 or above).

When making the connection through a hub or other device, use a straight cable (category 5 or above).

### 25 TALLY/GPI input/output connector [TALLY/GPI] (D-sub 15-pin, female, inch thread)

For details, refer to "Control interface for external devices" (<Operations and Settings> Instructions).

### 26 DC IN socket [12V = IN] (DC 12 V)

The AC adapter provided with the unit is connected to this socket.

### 27 Ground terminal [SIGNAL GND]

Connect this to the system's ground.

### 28 SERVICE switch [SV/NM]

This switch is used for maintenance purposes. Normally, it is set at the "NM" position.

### 29 Wire fastening fitting

An anti-theft wire available on the market can be fastened to this fitting to prevent theft.

# Basic operations of the unit

## 1 Turn on the unit's power.

Set the POWER switch to the ON position.  
Power is now supplied to the unit, and the POWER indicator lights.

- However, when [CAMERA] → [POWER] → AUTO ON item have been selected and "On" is selected as the AUTO ON item setting, power-on is automatically instructed for the remote cameras controlled by the [SYSTEM] → CAM IP DR item.

## 2 Select the remote cameras.

Select the remote cameras to be controlled using the CAMERA STATUS/SELECTION buttons.

## 3 Adjust the direction in which the remote cameras are to be pointed.

Use the PAN/TILT lever to adjust the direction in which the remote cameras are to be pointed.

## 4 Adjust the zoom.

Use the ZOOM button to adjust the lens zoom.  
When the TELE side is pressed, the zoom is set to the telephoto mode; when the WIDE side is pressed, it is set to the wide-angle mode.

## 5 Adjust the lens iris.

Use the IRIS dial to adjust the lens iris.

- While the lens iris is being adjusted, a level meter is displayed on the LCD panel. (What is displayed by the level meter is an approximate value.)



## 6 Adjust the focus.

Turn the FOCUS/PUSH OAF dial, and adjust the lens focus.

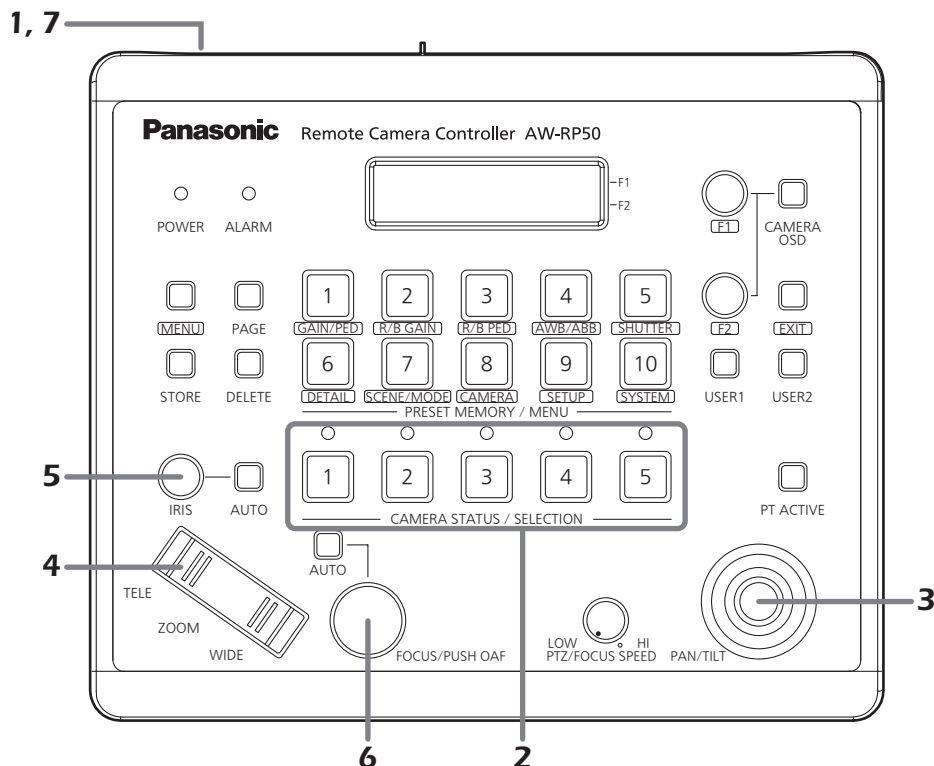
When the dial is pressed during manual focusing, the auto focus mode is established temporarily, and the subject is brought into focus automatically.

## 7 Turn off the unit's power.

Set the POWER switch to the OFF position.

The unit's power is turned off, and the POWER indicator goes off.

- Even when the unit's power is turned off, the power of the connected remote cameras does not go off.



For detailed operations, refer to the directions in the sections below.

# Basic operations for the menus

## 1 Set the MENU button to ON.

Press the MENU button and light its indicator.

## 2 Select the target menu.

Press the corresponding PRESET MEMORY/MENU button, and light its indicator.

For details on the menus assigned to these buttons, refer to “Table of menu items” (<Operations and Settings> Instructions).

The selected menu is displayed on the LCD panel.

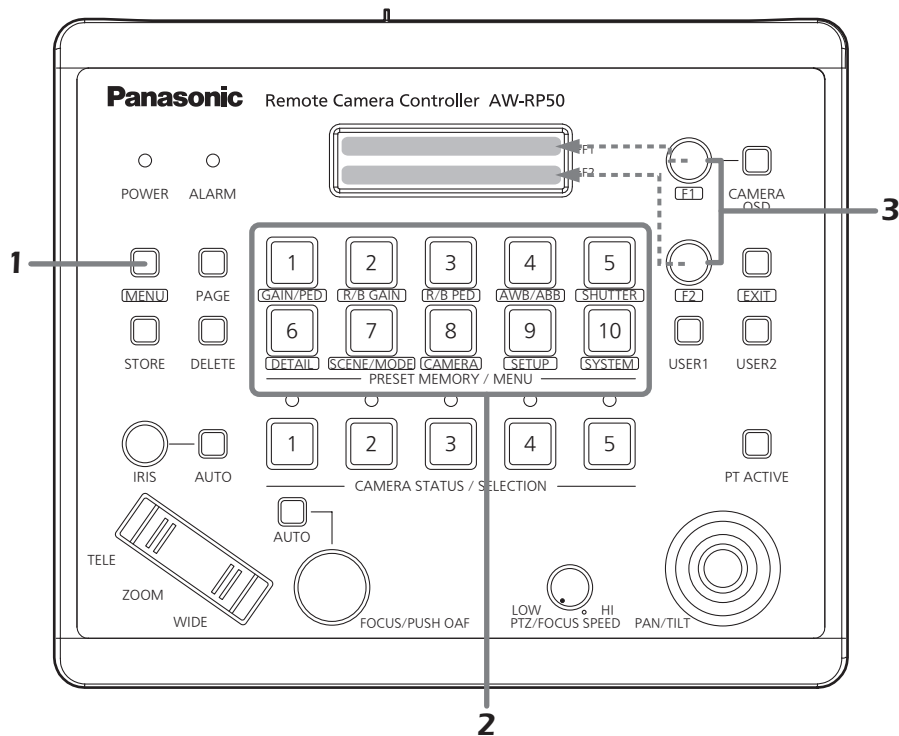
## 3 Change the settings using the F1 dial and F2 dial.

Use the F1 dial and F2 dial to select the menus and change the settings.

Use the F1 dial for operations involving the items displayed on the top line of the LCD panel.

Use the F2 dial for operations involving the items displayed on the bottom line of the LCD panel.

- Press the EXIT button to return the menu to its previous hierarchical level.



For detailed operations, refer to the directions in the sections below.

# Network settings

Select the settings for the network of the remote cameras connected to the unit.

## ■ Setting the unit

The unit's settings are established using the [SYSTEM] menu.

Set the IP address, subnet mask and default gateway. First, the basic menu operations will be described.

### 1 Set the MENU button to ON.

Press the MENU button, and light its indicator.

### 2 Set the PRESET MEMORY/MENU 10 button (SYSTEM) to ON.

When the button is pressed and its indicator is lighted, the [SYSTEM] menu is displayed on the LCD panel.

[1]CAMERA CTL ▼

### 3 Turn the F1 dial, and display the [NETWORK] menu.

[5]NETWORK ◆

### 4 Press the F1 dial.

1. IP ADDRESS ▼  
192↓168.000.009

### 5 Turn the F1 dial, and display the target setting item.

1. IP ADDRESS ▼  
192↓168.000.009



2. SUBNETMASK ◆  
255↓255.255.000



3. GATEWAY ◆  
000↓000.000.000



4. MAC ADDRESS ▲  
\*\*-\*\*-\*\*-\*\*-\*\*

### 6 Turn the F2 dial, and select the setting.

2. SUBNETMASK ◆  
255↓255.255.000

### 7 Press the F2 dial, and change the setting.

2. SUBNETMASK ◆  
255.255↓255.000

Input all the settings except for the MAC address in four blocks of numerals.

When input advances to the last block and the F2 dial is pressed, the IP address is entered.

2. SUBNETMASK ◆  
255.255.255.000↓

- The MAC address is merely displayed—it cannot be changed.

#### Note

In order for the settings to take effect, the unit must be restarted.

Turn off the unit's power, and then turn it back on again.



# Network settings

## Setting the IP address

On the [SYSTEM] menu, select the [NETWORK] menu, and display [IP ADDRESS].

Then operate the F2 dial to set the IP address.

Select a setting which will not duplicate the IP setting of another device.

1. IP ADDRESS ▼  
192↓168.000.009

### Note

In order for the setting to take effect, the unit must be restarted.

Turn off the unit's power, and then turn it back on again.

## Setting the subnet mask

On the [SYSTEM] menu, select the [NETWORK] menu, and display [SUBNETMASK].

Then operate the F2 dial to set the subnet mask.

2. SUBNETMASK ◆  
255↓255.255.000

### Note

In order for the setting to take effect, the unit must be restarted.

Turn off the unit's power, and then turn it back on again.

## Setting the default gateway

On the [SYSTEM] menu, select the [NETWORK] menu, and display [GATEWAY].

Then operate the F2 dial to set the gateway.

3. GATEWAY ◆  
000↓000.000.000

- A "000.000.000.000" setting for [GATEWAY] means "no default gateway".

### Note

In order for the setting to take effect, the unit must be restarted.

Turn off the unit's power, and then turn it back on again.

## Setting the MAC address

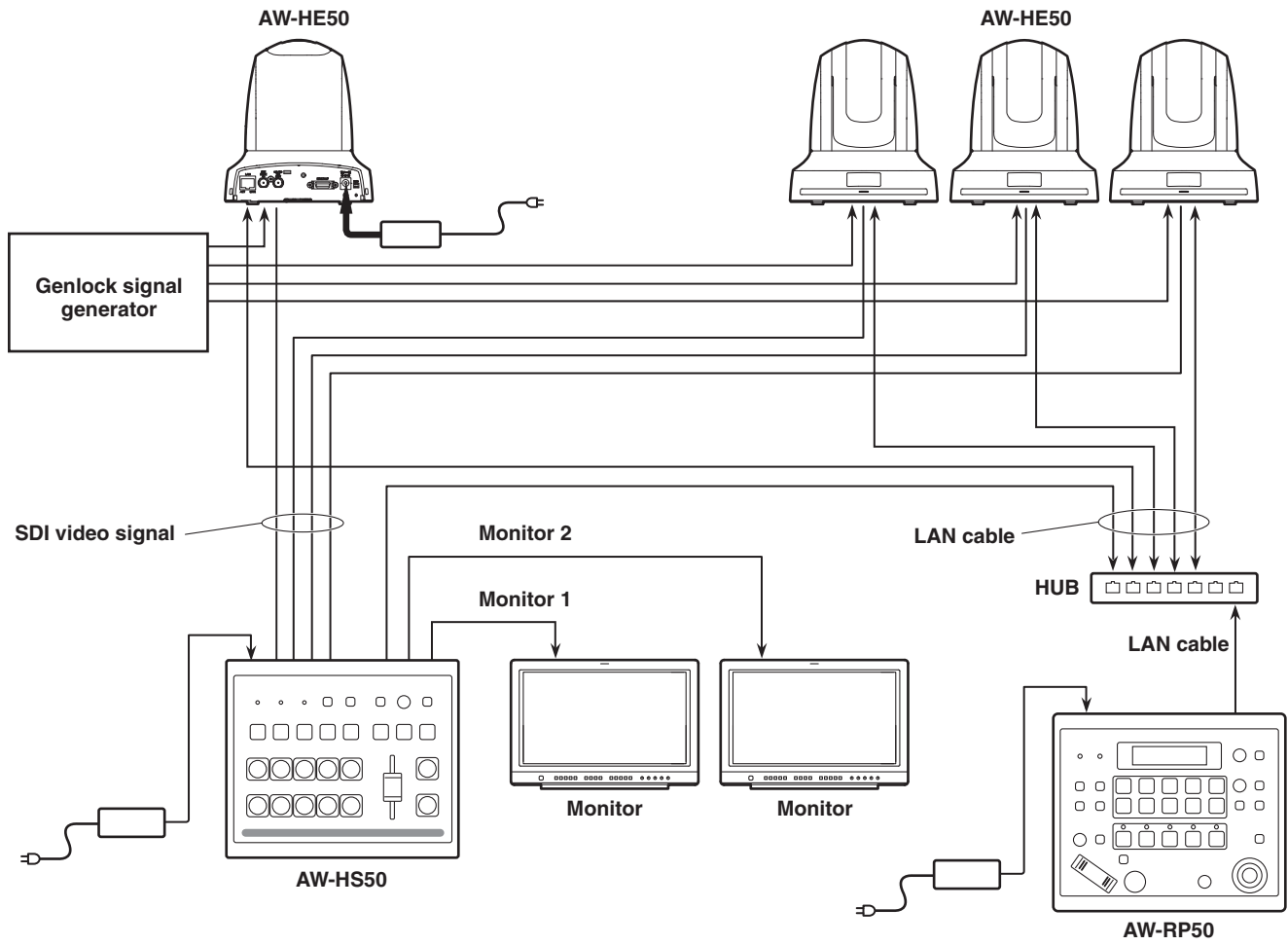
On the [SYSTEM] menu, select the [NETWORK] menu, and display [MAC ADDRESS].

4. MAC ADDRESS ▲  
\*\*-\*\*-\*\*-\*\*-\*\*

# Connections

## ■ Example of IP connections

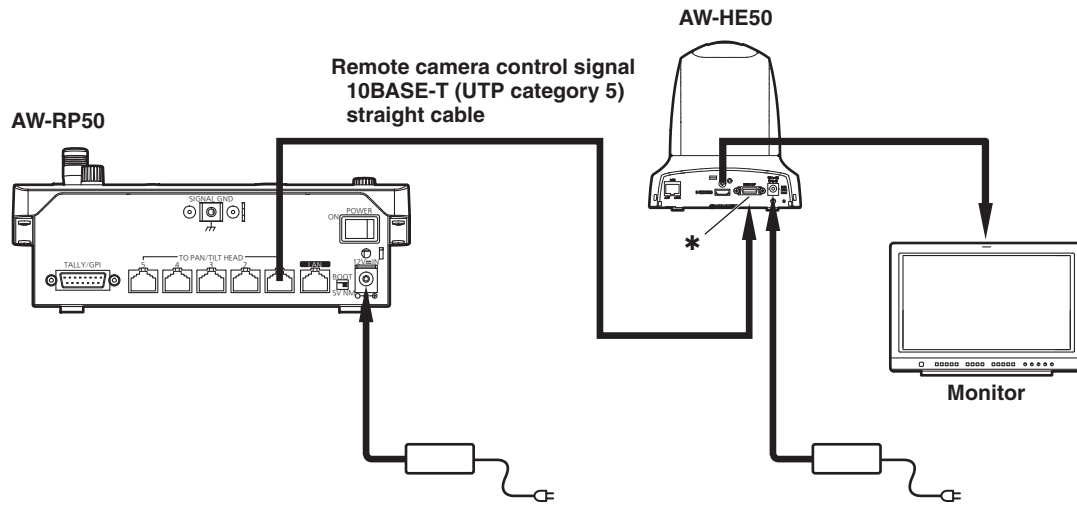
### ● Connections with the AW-HE50 and AW-HS50



# Connections

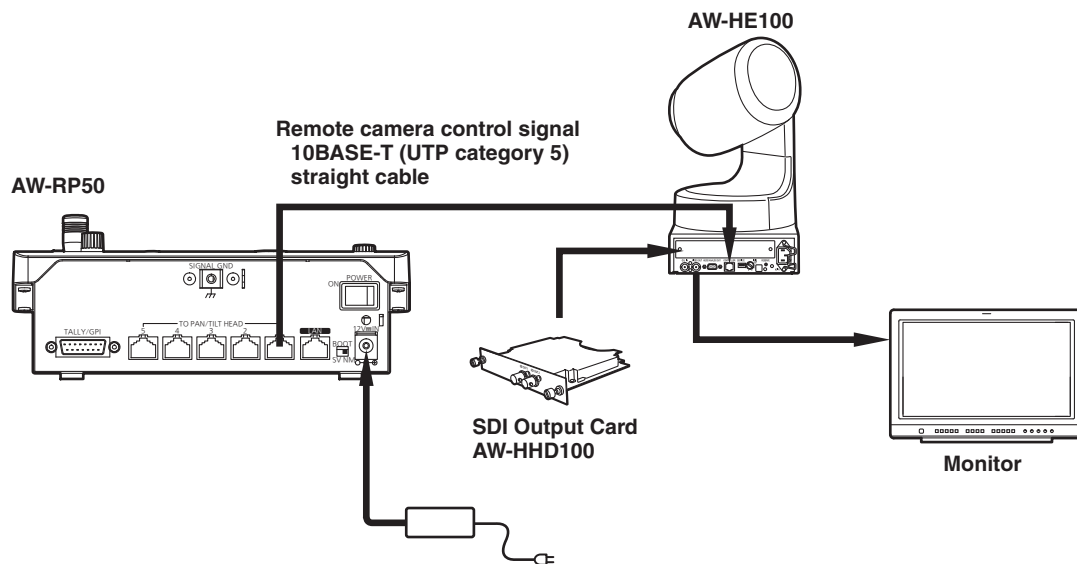
## ■ Example of serial connections

### ● Connection with the AW-HE50



\*: A conversion adapter is required for the serial connection with the AW-HE50.

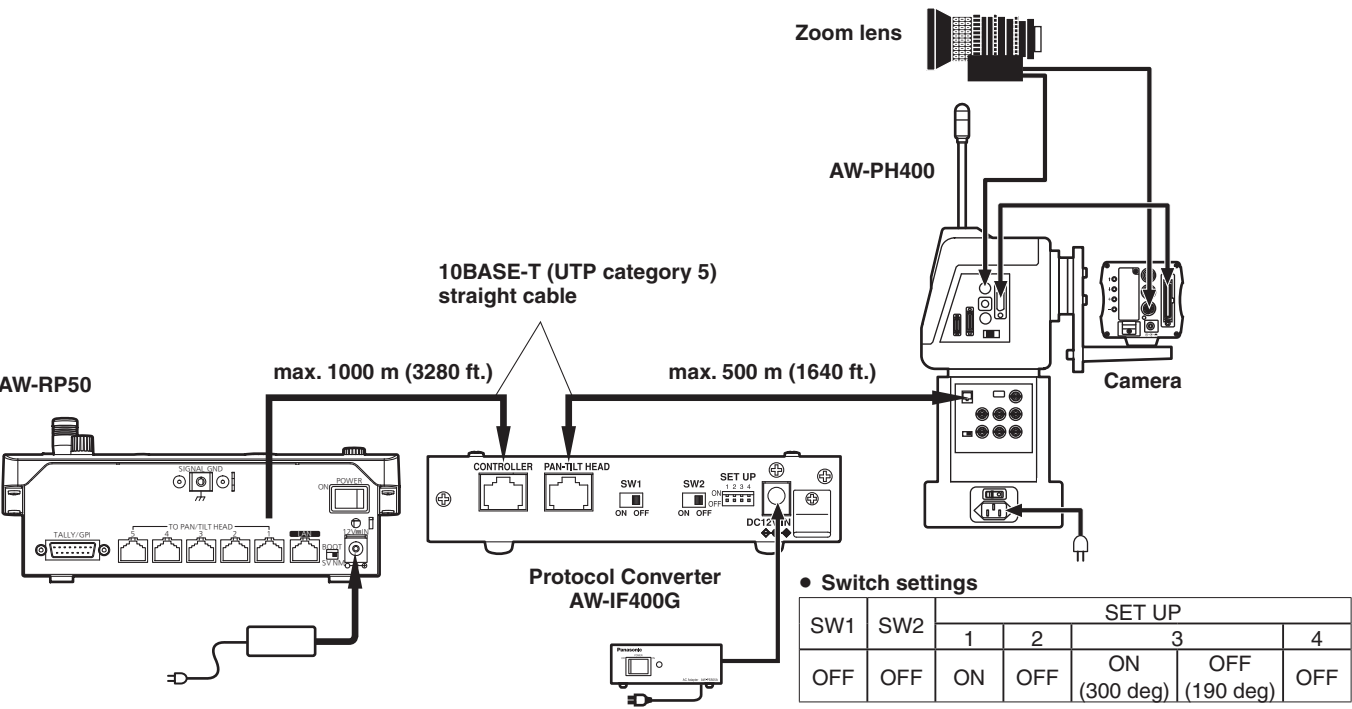
### ● Connection with the AW-HE100



# Connections

## ● Connections with the AW-PH400 and camera

Camera model:  
AW-HE870, AW-E860, AW-E750, AW-E650, AW-E350, AK-HC1500 or AK-HC1800

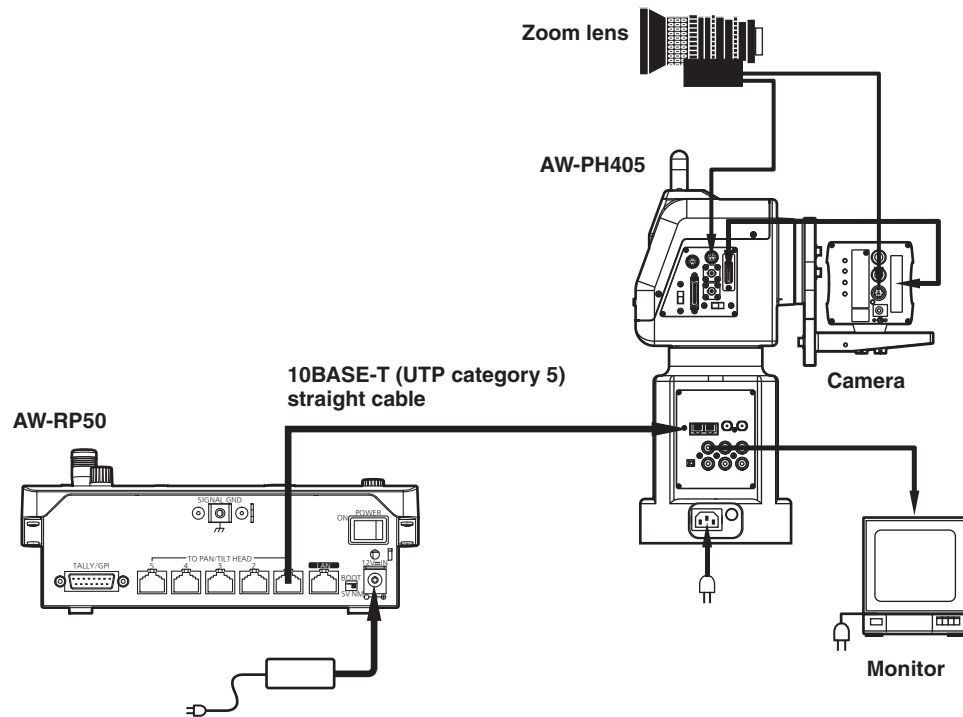


# Connections

## ● Connections with the AW-PH405 and camera

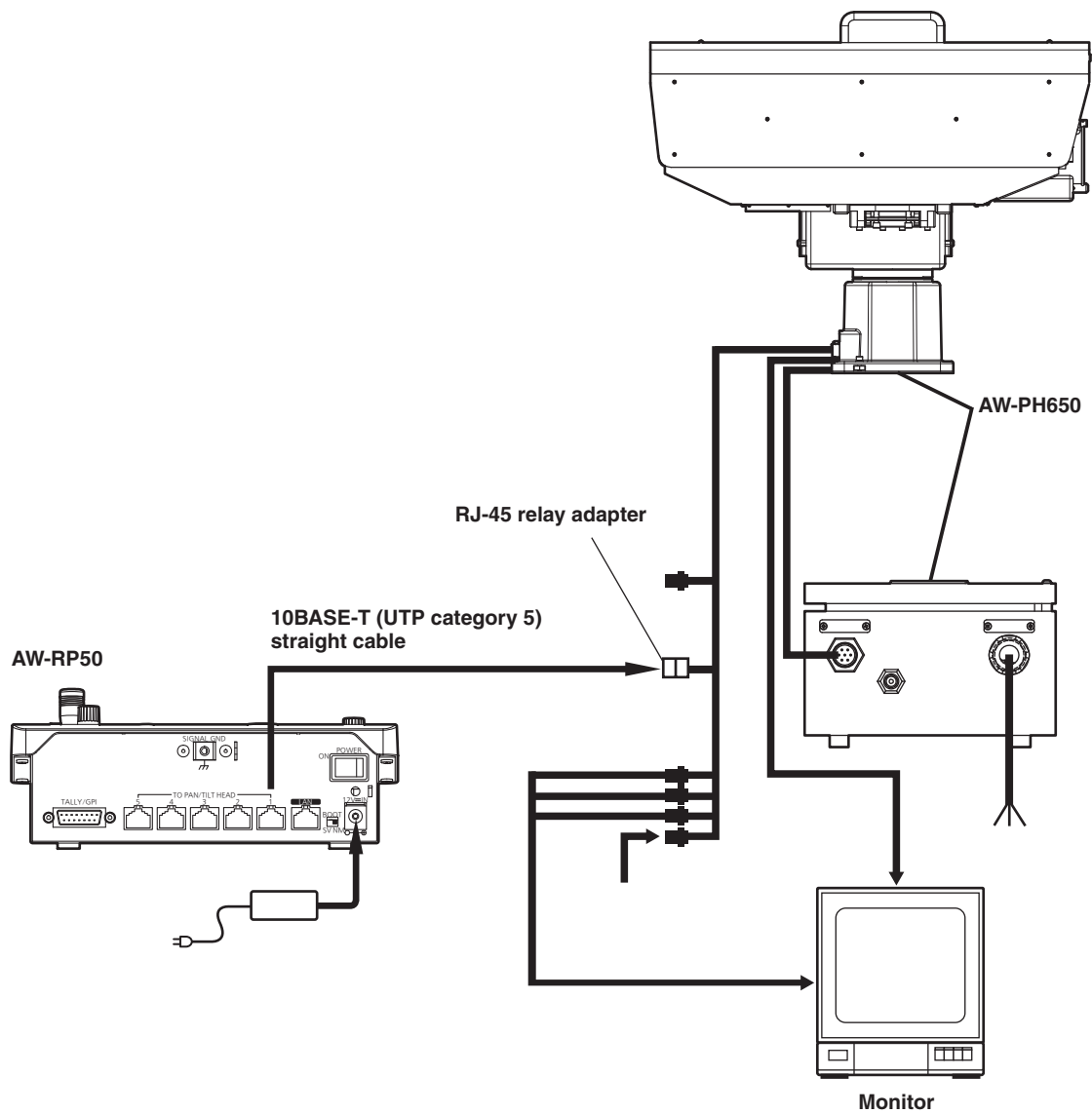
Camera model:

AW-HE870, AW-E860, AW-E750, AW-E650, AW-E350, AK-HC1500 or AK-HC1800



# Connections

## ● Connection with the AW-PH650



# Connections

## ■ Settings for connection with the remote cameras

Either serial connection “Serial” or IP connection “NetWork” can be selected for the connections between the unit and the remote cameras for camera numbers CAM1 to CAM100. On the [SYSTEM] menu, select [CAMERA CTL], and display [CAM1] to [CAM100].

Then select the setting for the camera numbers.

**Serial:** Serial connection

**NetWork:** IP connection

**NoAssign:** No setting assigned (initial setting)

### ● Serial connection

Select “Serial” as the setting for the target camera number.



Camera numbers CAM1 to CAM5 correspond to the TO PAN/TILT HEAD connectors [1] to [5] on the unit's rear panel.

- Serial connection “Serial” cannot be selected for camera numbers CAM6 to CAM100.

### ● IP connection

Select “NetWork” as the setting for the target camera number.

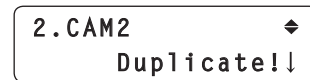


On the [SYSTEM] menu, select [CAM IP ADR], and display [IP:CAM1-100]. Then use the IP addresses corresponding to the camera numbers for the connection.

When “NetWork” is selected as the setting, a check is conducted to verify that the IP address of the target camera number is not in contention with the IP addresses already registered.

If there is contention in the IP address, the “IP Duplicate!” message is displayed on the bottom line of the LCD panel, and it will not be possible to set the IP address.

On the [SYSTEM] menu, select [CAM IP ADR], and display [IP:CAM1-100], and set the IP address of the target camera number again by changing the setting to avoid contention.



When “Auto IP setting” is initiated, the IP addresses will be set automatically for those camera numbers with the “NoAssign” connection setting.

# Connections

## ■ Setting the IP addresses automatically (auto IP setting)

When “Auto IP setting” is initiated, the IP addresses are set automatically for the remote cameras and the switcher which are connected within the same subnet.

The IP addresses can be set for up to 100 remote cameras and one switcher.

### Note

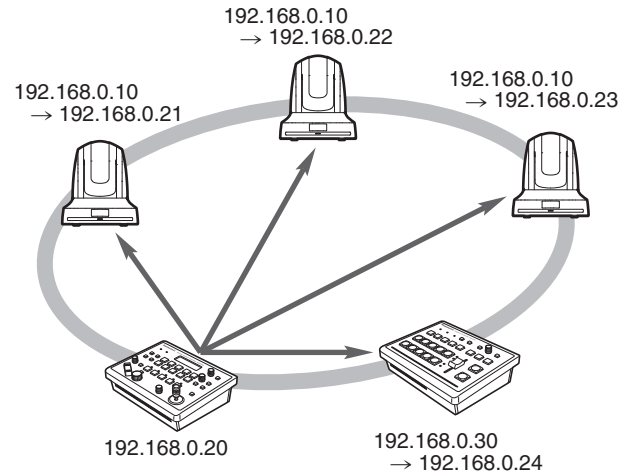
Contention in the IP addresses may arise when a device other than a remote camera or switcher has been connected within the same subnet.

Connect only devices which are covered by the “Auto IP setting” within the same subnet.

## ● When setting the IP addresses for the first time

The IP addresses are set while the remote cameras, switcher and unit are at their factory settings.

### 1 Connect the remote cameras, switcher and unit to the network within the same subnet.



### 2 On the [SYSTEM] menu, select [AUTO SET IP], and display [AUTO SETUP]. Then select RENEW, and press the F2 dial.

1. AUTO SETUP  
RENEW↓

The total number of all the remote cameras and switchers currently connected as well as the total number of the remote cameras and switchers scheduled to be added —the units that are the target of “Auto IP setting”— are displayed on the LCD panel.

C: 20/50 S: 1/1  
YES↓

C: 20/50

Number of units connected within the same network

Remote cameras and switchers scheduled to be added

C: Remote camera, S: Switcher



# Connections

When the total number of remote cameras and switchers scheduled to be added has exceeded the total number of units which can be registered (remote cameras: 100 units; switchers: 1 unit), the [C/S OVER!] message appears on the bottom line of the LCD panel. Auto IP setting can still be initiated this state, but the IP addresses will be set only for the number of units which can be registered.

C:20/20 S:1/1  
C/S OVER! YES↓

## Memo

The camera numbers whose IP addresses have been set using "Auto IP setting" will be set to "NetWork" for their connection setting. Consequently, when "Auto IP setting" is next initiated, these camera numbers will be excluded from being targeted by the setting. However, when the IP addresses of camera numbers whose IP addresses were set using "Auto IP setting" have been changed or the connection setting has been changed to "NoAssign" or "Serial", they will again be targeted by "Auto IP setting".

When the display for the number of units scheduled to be added has dropped below the actual number of units to be set because the power of the remote cameras or the switcher has not been turned on for some other reason, first remove the cause, and then select "RETRY", and press the F2 dial to initiate the IP address settings again. The number of units to be added can be updated.

C:20/20 S:1/1  
RETRY↓

## 3 Turn the F2 dial, select "Yes," and then press the F2 dial.

This starts the "Auto IP setting" process.

## Memo

- The numbers are set for the remote cameras in sequence starting with the lowest number which was set to "NoAssign" for the [CAM1] to [CAM100] item on [CAMERA CTL] selected from the [SYSTEM] menu. Similarly, the IP addresses which were set for the camera numbers are set for the remote cameras. The same subnet mask and default gateway settings as the unit's settings are selected.
- For the switcher, "NoAssign" is set for the [SW] item on [SW CTL] selected from the [SYSTEM] menu. The IP address which was set for the [IP:SW] item on [SW IP ADR] selected from the [SYSTEM] menu is selected for the switcher.

When "Auto IP setting" has been initiated, the progress is shown by the number of displayed dots which are reduced one by one.

SET UP IP  
.....

When all the operations have been completed successfully, "COMPLETE!" is displayed.

SET UP IP  
COMPLETE!

The remote cameras and the switcher are automatically rebooted, and they restart with the new IP addresses which were set.

The remote cameras can now be operated from the unit. The function for linking the switcher with the unit becomes available for use at this point.

If the IP addresses were not set successfully, "SET UP ERR!" is displayed.

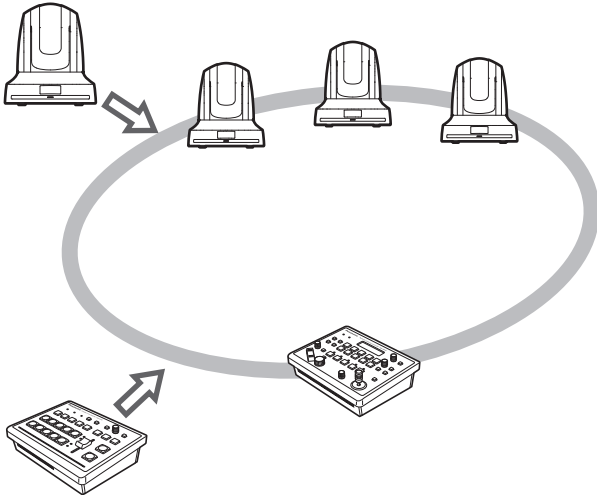
SET UP IP  
SET UP ERR!

This completes the settings for all the devices except for the ones for which errors resulted.

# Connections

## ● When introducing additional remote cameras or a switcher into an environment where similar existing devices are already in use

Even when additional remote cameras or switchers are introduced into an environment where similar existing devices are already in use, the settings can be easily established using “Auto IP setting”.



The operating procedure is the same as for “When setting the IP addresses for the first time”. Refer to this section. The settings can also be established without changing the network settings (IP address, subnet mask and default gateway settings) of the additional remote cameras and switcher which will be introduced. Refer to “When leaving the network settings of the additional devices to be introduced unchanged”.

When leaving the network settings of the additional devices to be introduced unchanged

- 1 Connect the additional remote cameras and the switcher to be introduced and the unit to the network within the same subnet.
- 2 On the [SYSTEM] menu, select [AUTO SET IP], and display [AUTO SETUP]. Then select “KEEP”, and press the F2 dial.

1. AUTO SETUP  
KEEP↓

The total number of all the remote cameras and switchers as well as the total number of the remote cameras and switchers scheduled to be added, which are the target of “Auto IP setting”, are displayed.

C: 20/50 S: 1/1  
YES↓

C: 20/50

└─ Number of units connected within the same network

└─ Remote cameras and switchers scheduled to be added

**C: Remote camera, S: Switcher**

When the total number of remote cameras and switchers scheduled to be added exceeds the total number of units which can be registered (remote cameras: 100 units; switchers: 1 unit), the [C/S OVER!] message appears on the bottom line of the LCD panel. Auto IP setting can still be initiated this state, but the IP addresses will be set only for the number of units which can be registered.

C: 20/20 S: 1/1  
C/S OVER! YES↓

### Memo

The camera numbers whose IP addresses have been set using “Auto IP setting” will be set to “NetWork” for their connection setting. Consequently, when “Auto IP setting” is next initiated, these camera numbers will be excluded from being targeted by the setting. However, when the IP addresses of camera numbers whose IP addresses were set using “Auto IP setting” have been changed or the connection setting has been changed to “NoAssign” or “Serial”, they will again be targeted by “Auto IP setting”.

# Connections

When the display for the number of units scheduled to be added has dropped below the actual number of units to be set because the power of the remote cameras or switchers has not been turned on or for some other reason, first remove the cause, and then select "RETRY", and press the F2 dial to initiate the IP address settings again.

The number of units to be added can be updated.

C: 20/20 S: 1/1  
RETRY ↓

## 3 Turn the F2 dial, select "Yes," and then press the F2 dial.

This starts the "Auto IP setting" process.

### Memo

- The numbers are set for the remote cameras in sequence starting with the lowest number which was set to "NoAssign" for the [CAM1] to [CAM100] item on [CAMERA CTL] selected from the [SYSTEM] menu. Similarly, the IP addresses which were set for the camera numbers are set for the remote cameras. The same subnet mask and default gateway settings as the unit's settings are selected.
- For the switcher, "NoAssign" is set for the [SW] item on [SW CTL] selected from the [SYSTEM] menu. The IP address (the one which was set for the [IP:SW] item on [SW IP ADR] selected from the [SYSTEM] menu) is selected for the switcher by "Auto IP setting".
- If the IP addresses of already set camera numbers ("NetWork" or "NoAssign" set for the [CAM1] to [CAM100] item on [CAMERA CTL] selected from the [SYSTEM] menu) and the IP addresses of the target devices to be added correspond, they are set for the camera numbers.  
If the remote cameras to be added are the same as the already set remote camera numbers but their IP addresses are different, the IP addresses of the already set camera numbers are changed to the IP addresses acquired by auto IP setting.

When "Auto IP setting" has been initiated, the progress is shown by the number of displayed dots which are reduced one by one.

SET UP IP  
.....

When all the operations have been completed successfully, "COMPLETE!" is displayed.

SET UP IP  
COMPLETE!

The remote cameras and the switcher are automatically rebooted, and they restart with the new IP addresses which were set.

The remote cameras can now be operated from the unit. The function for linking the switcher with the unit becomes available for use at this point.

The "IP Duplicate ERR!" message is displayed if there is contention between the IP addresses of the remote cameras in operation and the IP addresses of the additional remote cameras to be introduced. The IP addresses are not set for those remote cameras whose IP addresses are in contention.

SET UP IP  
IP Duplicate ERR!

If the IP addresses were not set successfully, "SET UP ERR!" is displayed.

SET UP IP  
SET UP ERR!

This completes the settings for all the devices except for the ones for which errors resulted.

# Connections

## ■ Changing the IP addresses of the remote cameras

### ● Selecting the camera group

On the [CAMERA] menu, select [GROUP], and display [GROUP SELECT]. Then select the camera group (1 to 20) for the camera numbers whose IP addresses are to be changed.

1. GROUP SELECT

1 ↓

1 : CAM1 to CAM5

2 : CAM6 to CAM10

↓

19 : CAM91 to CAM95

20 : CAM96 to CAM100

The [IP:CAM1] to [IP:CAM100] items are displayed.

### ● Setting the IP addresses

On the [SYSTEM] menu, select [CAM IP ADR], and display [IP:CAM1-100]. The IP addresses of the camera numbers can now be changed.

Even when “NoAssign” or “Serial” has been selected as the [CAM1] to [CAM100] setting of [CAMERA CTL] on the [SYSTEM] menu, the IP addresses can still be changed.

1. IP: CAM1

192.168.000.100 ↓

The IP addresses are set for all the camera numbers CAM1 to CAM100.

#### Initial values:

CAM1 (192.168.0.21)

↓

CAM100 (192.168.0.120)

#### Memo

If the unit's IP address has been changed using the [IP ADDRESS] item of [NETWORK] on the [SYSTEM] menu, the IP addresses of the camera numbers which were set to “NoAssign” for the [CAM1] to [CAM100] item of [CAMERA CTL] on the [SYSTEM] menu and which are higher than the unit's IP address, will be automatically re-set in the sequence of the camera numbers set to “NoAssign” starting with the lowest number.

When the IP addresses are changed, a check for IP address contention is conducted.

A check is carried out to verify whether there is any contention with the IP addresses of the camera numbers which were set to “NetWork” for the [CAM1] to [CAM100] item of [CAMERA CTL] on the [SYSTEM] menu.

If contention is found, the “Duplicate!” is displayed for three seconds, and the IP addresses cannot be set.

1. IP: CAM1

Duplicate!

# Connections

## ■ Changing the camera numbers

The camera numbers which have been set by “Auto IP setting” can be changed.

They are changed by replacing the IP addresses of the current camera numbers with the IP addresses of the camera numbers to be changed.

**1** On the [SYSTEM] menu, select [CAMERA CTL], and display [CAM1] to [CAM100]. Then select the camera number to be changed.

**2** Select the IP address of the remote camera for the selected camera number.

The tally indicator of the remote camera corresponding to the selected IP address lights.

Operate the PAN/TILT lever, and check whether the camera whose camera number is to be changed is being moved.

The IP address that can be selected is the IP address of the camera number which has been set for “NetWork” for the [CAM1] to [CAM100] item of [CAMERA CTL] on the [SYSTEM] menu.

**3** Press the F2 dial to enter the IP address.

The IP addresses for the camera number of the change destination and for the camera number of the change source are switched over.

1. IP: CAM1 ▼  
192.168.000.100 ↓

### Note

When “ASSIGN” is displayed for the [CAM1] to [CAM100] item of [CAM ASSIGN] on the [SYSTEM] menu, the CAMERA STATUS/SELECTION button cannot be operated, and the camera operations (IRIS, FOCUS, PT, ZOOM and CAMERA OSD) cannot be controlled.

## ■ Changing the IP address of the switcher

The IP address of the switcher which was set by “Auto IP setting” can be changed.

**1** On the [SYSTEM] menu, select [SW IP ADR], and display [IP:SW]. Then change the IP address.

## ■ Clearing the IP address control tables

All the IP address control tables which have been set can be cleared together.

**1** On the [SYSTEM] menu, select [AUTO SETUP], and display [AUTO SETUP]. Then select “ALL CLEAR”, and press the F2 dial to clear all the tables.

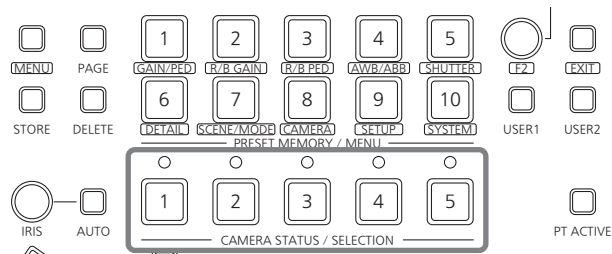
1. AUTO SETUP  
ALL CLEAR ↓

- The “Serial” settings are not cleared.

# Selecting the remote cameras to be operated

Up to five remote cameras to be operated can be selected using the CAMERA STATUS/SELECTION buttons. When one of the CAMERA STATUS/SELECTION buttons 1 to 5 is pressed, the indicator of the corresponding button lights.

The statuses of the remote cameras assigned to CAMERA STATUS/SELECTION buttons 1 to 5 can be identified by the lighting statuses of the indicators above the buttons.



## Indicator lighting statuses and remote camera statuses

Indicator lighting status	Remote camera status	CAMERA STATUS/SELECTION button operation
OFF	<ul style="list-style-type: none"> <li>No remote camera has been assigned to the corresponding button.</li> <li>No power is supplied to the remote camera.</li> <li>The LAN cable is not connected.</li> </ul>	Disabled
ON (orange)	The remote camera is in the standby status.	Enabled
Blinking (orange)	Five other controllers are connected to the remote camera so the unit cannot be connected.	Disabled
ON (green)	The unit is now connected with the remote camera.	Enabled
Blinking (green)	Another device has selected the corresponding remote camera.	Enabled
ON (red)	The image of the corresponding remote camera is now on the air.	Enabled
Blinking (red)	Another device has selected the corresponding remote camera, and the image of the camera is now on the air.	Enabled

Up to 100 cameras can be divided into 1 to 20 groups by menu operations, and controlled by the unit. The selection procedure is described below.

### 1 Set the MENU button to ON.

Press the MENU button and light its indicator.

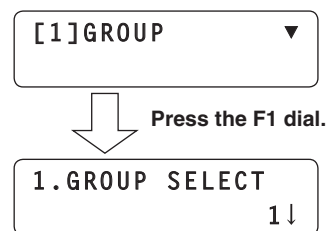
### 2 Set the PRESET MEMORY/MENU 8 BUTTON (CAMERA) to ON.

When the button is pressed and its indicator is lighted, the [CAMERA] menu is displayed on the LCD panel.



### 3 Press the F1 dial.

The GROUP SELECT item is displayed.



### 4 Turn the F2 dial, select the group, and then press the F2 dial.

The remote cameras assigned to the group selected here can be selected using the CAMERA STATUS/SELECTION buttons.

# Maintenance

---

Carry out the maintenance described below at periodic intervals to ensure the safety and performance of the unit.

- Disconnect the power plug, and wipe the unit's surfaces with a dry cloth.

To remove stubborn dirt, soak the cloth in a diluted solution of kitchen detergent (neutral), wring it out well, and wipe the surfaces gently

## Notes

- Do not use benzene, paint thinners or other volatile solvents.
- Before using a chemical cleaning cloth, read the precautions for its use.

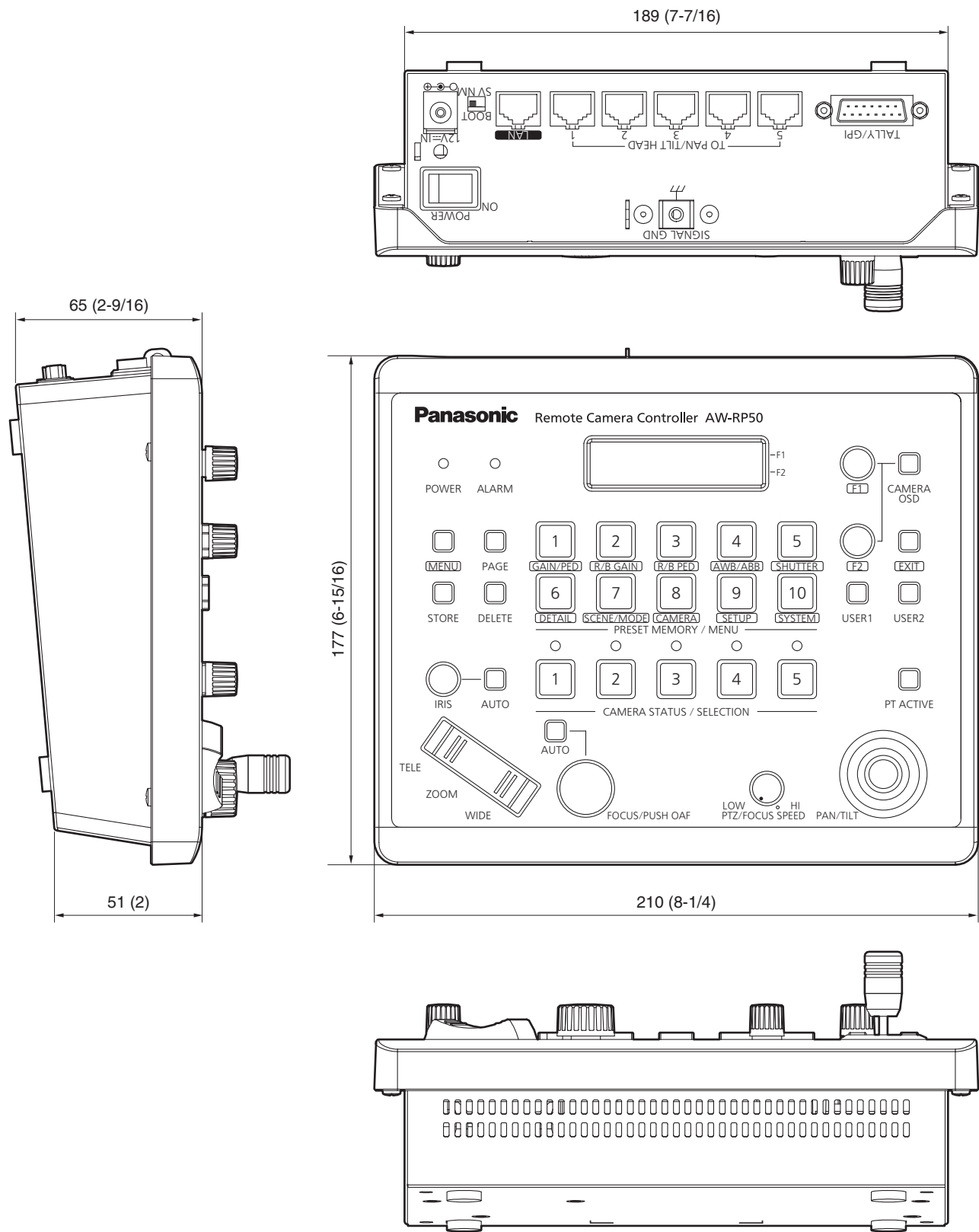
## ■ WARNING

- **Before proceeding with maintenance, disconnect the power plug from the power outlet, and allow the unit to cool down.**

Otherwise, electric shocks, burns or injuries may result. Do not connect or disconnect the power plug with wet hands.

# Appearance

Unit: mm (inch)





# Specifications

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**Power requirements:** DC 12 V  $\pm$  10 %  
(AC adapter provided)  
**Power consumption:** DC 12 V, 0.5 A

 indicates safety information.

## ■ GENERAL

**Ambient operating temperature:**  
0 °C to +40 °C (32 °F to +104 °F)

**Allowable humidity ranges:**  
10 % to 90 % (no condensation)

**Mass:**  
Approx. 2.0 kg (4.4 lbs.)

**Dimensions (W × D × H):**  
210 × 177 × 66 mm  
(8-1/4" × 6-15/16" × 2-5/8")  
[excluding protrusions]

## ■ AC adapter

**Input:**  
AC 100 V to 240 V, 50/60 Hz

**Output:**  
DC 12 V, 2.5 A

**The provided power cable is for 125 V AC or less.  
Use it within AC 100 V to 120 V.**

## ■ Input/Output connector

**LAN (RJ-45):**  
10BASE-T/100BASE-TX  
Connecting cable:  
Category 5 straight cable  
max. 100 meters (328 ft.)

**TO PAN/TILT HEAD (RJ-45):**  
RS-422 (control signals for remote cameras)  
Connecting cable:  
Category 5 straight cable  
max. 1000 meters (3280 ft.)

**TALLY/GPI (D-sub 15-pin, female inch thread):**  
**TALLY IN:**  
5 inputs (for receiving photocoupler signals)  
**GPI:**  
4 inputs (for receiving photocoupler signals)  
4 outputs (open collector outputs) (negative logic)



**PANASONIC BROADCAST & TELEVISION SYSTEMS COMPANY**  
UNIT COMPANY OF PANASONIC CORPORATION OF NORTH AMERICA

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**EASTERN ZONE:**

3 Panasonic Way 4E-7, Secaucus, NJ 07094 (201) 348-7196

**WESTERN ZONE:**

3330 Cahuenga Blvd. West, Los Angeles, CA 90068 (323) 438-3608

**Government office:**

(201) 348-7587

**Broadcast PARTS INFORMATION & ORDERING:**

9:00 a.m. – 5:00 p.m. (PST) (800) 334-4881/24 Hr. Fax (800) 334-4880

Emergency after hour parts orders (800) 334-4881

**TECHNICAL SUPPORT:**

Emergency 24 Hour Service (800) 222-0741

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